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ABSTRACT

This publication presents four major research papers on college campus substance abuse prevention and research with reviews of the papers by practitioners in the substance abuse prevention field. Following a Preface and Introduction, the first paper is "Theories, Dominant Models, and the Need for Applied Research" by Gerardo M. Gonzalez. It examines the lack of theoretical models and theory-driven research in this area. The second paper is "Current Knowledge in Prevention of Alcohol and Other Drug Abuse" by Lewayne D. Gilchrist. This paper traces the development of current approaches to alcohol and drug abuse prevention and on the effectiveness of prevention programs for youth conducted during the last 30 years. The third paper, "The Influence of College Environments on Student Drinking" (George D. Kuh) summarizes research on environmental influences and suggests ways to create good environmental conditions. The last paper is "Assessing Collegiate Substance Abuse: Current Trends, Research Needs, and Program Applications" (Alan D.Berkowitz). This paper recommends basing survey assessment on theoretical frameworks and discusses recent attempts to standardize survey instruments and survey administration procedures. A final section offers responses by John H. Schuh ("Reactions from a Metropolitan Campus"), Bettye Ward Fletcher ("The Perspective of Historically Black Colleges and Universities"); M. Lee Upcraft ("Response from a Public University"); and William H. Barr and Judith M. Chambers ("A Private University Perspective"). Vonnie V. Clement offers "A Final Word." Each of the four main papers contains extensive references. (JB)

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I

Foreword

The Network of Colleges and Universities Committed to the Elimination of Drug and Alcohol Abuse established as one of its goals identifying areas and problems for further research and development. Similarly, funding priorities of the Anti-Drug Abuse Act of 1988 demonstrated a commitment by Congress to drug and alcohol research by providing $40 million in supplemental funds for expanding research efforts in the areas of drug and alcohol abuse.

It was determined that further research was needed because there had been up to that time very little systematic analysis of college student drug and alcohol abuse. The existing research did not provide sufficient insight for higher education institutions to implement policies and programs to prevent abuse. Typically, research efforts were limited to describing the prevalence of drug and alcohol abuse on a single campus by various subsets of the population. Ongoing measures of knowledge, attitudes, and behavior were lacking as well as reports of programmatic successes and obstacles to implementing the campus-based effort. National and institutional efforts lacked evidence to guide the allocation of resources to programs where there is a high prognosis for success in helping students both to limit risk behavior and enhance academic performance.

In July 1989, a distinguished group of researchers and practitioners from universities, government agencies, and research centers was convened with the purpose of developing a research agenda that addressed the issues of collegiate alcohol and drug abuse. Their charge was fourfold: to review the current research and information in college student alcohol and drug use and abuse; to determine the gaps as well as the strengths with particular attention given to the implications for practice; to identify the major areas of applied research including areas such as causal factors, usage patterns, attitudes, and evaluation techniques; and to develop a plan for conducting further research in each of the identified topic areas.

As a result of that meeting, four follow-up papers were commissioned by the U.S. Department of Education. The commissioned papers, which are included in this publication, present what is known in the field regarding theories and models of prevention, college environments, and assessment. They identify major areas where applied research on alcohol and drug abuse and the college campus is needed and provide a written review to be used for program development and in-service training.

We hope that this document will be useful to you as you develop or evaluate your institution's effort to eradicate alcohol and other drug abuse from the collegiate environment.

II

Introduction

This compendium, initiated by the U.S. Department of Education's Network of Colleges and Universities Committed to the Elimination of Drug and Alcohol Abuse, brings together the views of members of the higher education community on alcohol and other drug abuse prevention and research on the college campus. Major articles are provided on four issues—prevention theory, intervention research, environmental influences and assessment. These topics have been considered from a research-based, applied perspective. They were selected as the result of recommendations made by a national group of researchers and practitioners convened under the auspices of the U.S. Department of Education in Washington, D.C. The purpose of this meeting was to develop a national agenda for applied prevention research on the college campus. As a result of the meeting, the areas mentioned above emerged as priorities for further study and development. Each author in this compendium has reviewed the published literature in these areas and has recommended topics for further research and practice.

In section III, Gerardo M. Gonzalez examines the lack of theoretical models and theory-driven research to guide alcohol and other drug abuse prevention efforts on campus. He discusses several emerging theoretical models that have implications for college prevention work, and he underscores the need for appropriate theoretical models applicable to college populations. He discusses his own Integrated Theoretical Model for Alcohol and Drug Prevention (ITMADP) framework, which encompasses individual motivation, interpersonal/social skills acquisition, efficacy expectations, and interactions with the environment as predictors of alcohol and other drug use behavior.

The development of the current approaches to alcohol and other drug abuse prevention is reviewed in section IV by Lewayne D. Gilchrist. This section focuses on research on the effectiveness of prevention programs for youth conducted during the last 30 years; current directions in preventing alcohol and drug use; and ways to build effective prevention programs for the future based on theory, research, and practical experience. Gilchrist offers suggestions for the campus alcohol and drug abuse prevention coordinator who wants to develop a comprehensive program. Her suggestions are based on current prevention research that stresses the importance of addressing both individuals and their environments to achieve lasting behavioral change.

In section V, George D. Kuh summarizes research on the influence of collegiate environments on students' use of alcohol and suggests ways to create environmental

conditions that foster positive, health-enhancing behaviors. He defines "health-enhancing environments" as campus settings in which the institution's philosophy, culture, physical spaces, policies, practices, students, faculty, and staff foster the responsible use of alcohol for legal drinkers.

In the sixth section, Alan D. Berkowitz reviews the use of surveys assessing alcohol and other drug use for counseling, education, and evaluation purposes and recommends that they be based on relevant theoretical frameworks. He discusses some recent attempts to standardize survey instruments and survey administration procedures, including the Fund for the Improvement of Postsecondary Education's (FIPSE's) Pre/Post Core drug prevention instrument and the Centers for Disease Control's Youth Risk Behavior Survey. He focuses on the lack of uniformity in assessment methodologies. He also notes gaps in the literature and makes recommendations for future study.

Section VII contains four reviews of the articles. The authors of the reviews are practitioners—rather than researchers—in the substance abuse prevention field. Each reviewer has responded to the articles based on the perspective of his or her particular campus. One response represents the perspective of an administrator from one of the historically black colleges and universities (HBCUs); another gives the viewpoint of a major metropolitan campus; a third represents the stance of a public university; and a fourth provides insights from a private university.

Together, these chapters and the reactions from the practitioners reflect the current thinking on what is known about alcohol and other drug abuse prevention on the college campus. It is hoped that this information will stimulate further discussion and research into appropriate models of prevention for college students. For too long, college prevention programs have developed in an a theoretical manner based on judgments not supported by the research literature. However, it is now possible to apply theory to practice in a less expensive, more efficient, and more productive manner. Moving the field closer to this ultimate goal is the purpose of this compendium.

III

Theories, Dominant Models, and the Need for Applied Research[1]

"There is nothing quite so practical as good theory and nothing so good for theory-making as direct involvement with practice."

—Nevitt Sanford

Background

Most alcohol and other drug education efforts in institutions of higher education are being conducted by student affairs professionals (Sandeen 1988). Since the 1960s, most student affairs programs have been based on theories of student development, which focus on enriching the individual (Widick, Knefelkamp & Parker 1980). However, to find guidance for developing alcohol and other drug education programs, program designers in higher education have primarily reviewed literature on alcohol and drug abuse rather than student development theory.

This drug abuse literature contains numerous theories. In a monograph on contemporary theories of drug abuse (Lettieri, Sayers & Pearson 1980), 43 theories are covered. To add to the complexity, the theories span the disciplines of social, behavioral, and biological sciences. Deciding which of these theories is most effective is difficult because the data have not been empirically tested for most of the current theories (Galizio & Maisto 1985). Thus, research in this field is not as rigorous as it could be.

In addition, few of the existing, workable theories have been applied to the field of drug abuse prevention and education. Alcohol and other drug education programs in colleges (and in elementary and high schools) have been developed in an atheoretical manner. That is, they have been based on educational judgments that are not supported in the research literature (Braucht & Braucht 1984; Bukoski 1986; Schaps, DiBartolo, Moskowitz, Palley & Churgin 1980). Failure to base program development on theory is especially characteristic of alcohol and drug education programs on college campuses (Gonzalez 1988a; Saltz & Elandt 1986), where such programs have proliferated rapidly in recent years (Gadaleto & Anderson 1986). The

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[1]Gerardo M. Gonzalez, Ph.D., University of Florida, author. Preparation of this section was made possible, in part, by Contract #43-3J47-0-00265 from the U.S. Department of Education.

lack of theoretical frameworks for college efforts has made it difficult to conduct program evaluation and has led to increasing demands from college administrators for information on "what works" to prevent alcohol and other drug-related problems (Magner 1988). The purpose of this section is to review the most influential concepts in the prevention field and to identify models that may be applicable to alcohol and other drug education on the college campus.

Dominant Theoretical Models

Sociocultural Model of Prevention and Distribution-of-Consumption Theory

Although several theoretical models relevant to alcohol and drug education have been proposed (Amatetti 1987), few prevention and education programs, particularly on college campuses, have been developed based on these models. Most of these programs are based on the *sociocultural model of prevention.* An assumption made in the sociocultural model is that change in knowledge will lead to a change in social norms. Applied primarily to alcohol education, this model suggests that social norms about drinking must be changed to reduce alcohol problems. The prevention goal focuses on establishing new social norms that will promote safe, responsible drinking (Nirenberg & Miller 1984). According to Nirenberg & Miller (1984, p. 10), "This would be achieved by (1) clearly distinguishing between responsible drinking and alcohol abuse, (2) establishing a "safe" drinking level in terms of quantity and frequency, (3) reducing the social importance and mystique of drinking, and (4) emphasizing the use of alcohol in a social-recreational context rather than solitary drinking for the purpose of intoxication." The sociocultural model of prevention assumes that if people are provided with information about alcohol (or other drugs) and their effects, people's knowledge about these substances will increase. Increased knowledge will then lead to positive attitude changes, which will be followed by less use or abuse. Goodstadt (1978) examined the assumptions made under this knowledge-attitude-behavior framework and found them to be seriously flawed. Nevertheless, such assumptions have dominated the thinking of college prevention practitioners since the mid-1960s.

Perhaps the most important factor in the rapid proliferation of alcohol education programs in American colleges and universities during the 1970s and 1980s was the 50 Plus 12 Project sponsored by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (Kraft 1976; Gadaleto & Anderson 1986). The goals of this sociocultural model-based project were (1) to gather information regarding drinking practices and activities on campus; (2) to disseminate information about alcohol, alcohol use, and alcohol abuse; and (3) to encourage universities to develop alcohol-related educational programs. As part of this effort, the *Whole College Catalog About Drinking* (Hewitt 1976) was disseminated to every college and university in the United States. This publication endorsed the development of responsible attitudes toward alcohol as the overriding goal of alcohol education and prevention on the college campus.

The 50 Plus 12 Project was extremely successful in encouraging college representatives to discuss alcohol abuse and to develop programs of education and

prevention. Reporting on a follow-up of this federal effort, Kraft (1977) found that the project had stimulated alcohol education programming at 81 percent of the participating universities. The concept of responsible drinking promoted by the project became a dominant theme. However, despite efforts to define "responsible drinking" behaviors (Gonzalez 1978; 1990), the concept has generally remained ambiguous. In a poster distributed nationally by the NIAAA in the mid-1970s, the following caption appeared: "If you need a drink to be social, that's not social drinking." Such definitions have been criticized in the research literature as being too general to prevent alcohol-related problems (Cellucci 1984). As a result, NIAAA prevention efforts have changed their emphasis from promoting responsible drinking to reducing overall per capita consumption of alcohol (NIAAA 1984).

The change in emphasis from promoting responsible drinking to discouraging the use of alcohol results from two related factors. First, the sociocultural model of prevention is being abandoned in favor of a *distribution-of-consumption model* (Holder & Stoil 1988). The distribution-of-consumption (or *single-distribution*) model is based on the theory that a direct relationship exists between the amount of alcohol consumed and alcohol problems in a population (Bruun et al. 1975). Those supporting this model seek to reduce the availability of alcohol by increasing its price, reducing the number of hours during which it is sold, and limiting the age at which it can be purchased. They are interested in using public policy to help prevent alcohol and other drug abuse. For illicit drug use, the concepts of "supply reduction" and "user accountability" have become popular in national prevention policy (U.S. Congress 1988). Interest has increased regarding the legal aspects of manipulating public policy in these ways (Gordis 1988; Moore & Gerstein 1981; NIAAA 1987).

The research shows that although availability influences the incidence of alcohol problems (Moskowitz 1986), the relationship between the two is not clear. For example, there is considerable evidence that the minimum legal drinking age affects the number of automobile crashes among affected age groups (Cook & Tauchen 1984; DuMouchel, Williams & Zador 1987; Wagenaar 1983). The effects of the legal drinking age on alcohol consumption in general (Hingson et al. 1983; Vingilis & Smart 1981)—and on alcohol use among college students in particular (Gonzalez 1989b; Hughes & Dodder 1986; Perkins & Berkowitz, in press)—is less clear. In summarizing the effects of regulations on drinking and driving, Moskowitz (1986, p. 34) said, "The extent to which formal controls are effective may depend upon their ability to stimulate or reinforce informal social controls. Hence, formal controls must be congruent with informal controls and must be adequately communicated to be effective." Therefore, efforts made on campus to reduce the availability of alcohol by formulating policies should be carefully designed to fit the campus culture. For example, the campus policy may require parties to have closed bars rather than kegs and have the bar attended by trained students of legal drinking and serving age who could serve as monitors.

The second reason for the change in emphasis from promoting responsible drinking to discouraging the use of alcohol is that no one has been able to demonstrate experimentally the effectiveness of prevention approaches based on the sociocultural model. In an extensive review of the literature on evaluating educational

strategies to prevent alcohol problems (most of them conducted with school-age children), Braucht and Braucht (1984) reported that researchers widely agree that information-only strategies do not have much effect on behavior. However, they added, "[S]evere and pervasive methodological flaws in the extant evaluation studies make *any* conclusions regarding the effectiveness of alcohol/drug-use educational strategies more a matter of reliance on faith than on credible empirical evidence" (p. 262). The same thing can be said of all approaches to the prevention of alcohol problems (Moskowitz 1986) and to health education in general (Lorig & Laurin 1985).

If the sociocultural model (and its focus on the promotion of responsible attitudes about drinking) is to remain viable, educators must demonstrate the effectiveness of such programs for reducing alcohol-related problems. Goodstadt and Caleekal-John (1984) identified 14 studies that have experimentally assessed the impact of campus-based alcohol education programs. The authors concluded that the number of experimental studies is sufficient to begin to assess the potential for such programs even though all of the studies had problems in research design and/or analysis. Kinder, Pape, and Walfish (1980) proposed criteria to be used as minimal requirements for future research projects. Desirable features include (1) adequate descriptions of the target population and educational methods; (2) random assignment to experimental and control groups; (3) collection of follow-up data; (4) appropriate statistical procedures; (5) experimental designs capable of detecting potential interaction effects (e.g., type of educational strategy by type of student); (6) behavioral assessment at different points in time as well as assessment of knowledge, attitudes, and other intermediate variables; and (7) "the greatest need and challenge for all research in the area is the development and use of measures of attitudes, knowledge, and behavior that are psychometrically adequate" (p. 1052). The importance of these and other assessment issues is discussed in more detail by Berkowitz in section VI.

Value Expectancy Theories

Value expectancy theories are a family of theories stating that an individual's behavior can be predicted (Goldman, Brown & Christiansen 1987; Rotter 1954). One such theory widely used in the design of alcohol and other drug education, as well as in general health education, is the *health belief model.* The health belief model relates theories of decision making to an individual's perceived ability to choose from alternative health behaviors (Rosenstock 1974). The theory underlying the health belief model has been attributed to Lewinian theory of goal setting in the level-of-aspiration situation. Lewin (cited in Maiman & Becker 1974) hypothesized that behavior depends primarily upon two variables: (1) the value placed by an individual on a particular outcome and (2) the individual's estimate of the likelihood that a given action will result in that outcome. In the health belief model, an individual's motivation to act is analyzed as a function of whether or not he or she expects to attain a health-related goal. The health belief model provides a theoretical basis from which health-related behavior might be predicted and altered.

Rosenstock (1974) said that the health belief model is based upon the idea that it is the world *as it is perceived* that will determine an individual's actions and not the actual physical environment. (This theory is derived from phenomenology, a branch of philosophy.) According to this model, individuals will act to avoid a health problem, but they first need to believe they are personally susceptible to the problem. Second, they need to perceive the severity of the situation before they will take a particular action. Third, the probability that an individual will act to improve his or her health is determined by the individual's perception of the benefits of and barriers to alternative behaviors. A beneficial alternative is one that is likely to reduce the severity of a health problem or one's susceptibility to it. Finally, a "cue to action" such as an internal stimulus (e.g., perception of bodily states) or an external stimulus (e.g., mass media communications, personal knowledge of someone affected by the condition) must occur to trigger the appropriate health behavior.

The health belief model has been used to design individually focused drug education and prevention programs (Albert & Simpson 1985; Iverson 1978; Kaufert, Rabkin, Syrotuik, Boyco & Shane 1986). Kleinot and Rogers (1982) successfully applied this model to an alcohol education program for college students. The program focused on (1) the adverse consequences of excessive drinking, (2) the probability that these consequences would occur, and (3) the effectiveness of abstinence or moderation in preventing these consequences. In their experiment, Kleinot and Rogers systematically examined the effects of this information on students. They found that college student drinkers' intentions to moderate their drinking habits were positively affected by the information.

Portnoy (1980) developed a for-credit alcohol education course for college students incorporating factors of the health belief model and persuasive communication strategies. The results of a multivariate analysis of variance demonstrated the overall effectiveness of the program. Portnoy concluded that the program was effective for college students who were not problem drinkers because it increased their knowledge about alcohol, reinforced desirable attitudes and beliefs, and reduced beer consumption. He suggested that the program could have had greater personal impact if more emphasis had been placed on the subjects' susceptibility to alcohol-related problems, such as difficulties relating to peers and parents or traffic citations for drunk driving. These problems were seen as potentially more relevant than presenting medical and psychological problems, which often seem irrelevant to college students.

In addition to predicting an individual's health-related behavior, the health belief model can help predict an institutional or societywide response to a health problem (Gonzalez 1988a). For example, efforts have been conducted over the last 10 years to encourage college leaders nationwide to discuss the impact of alcohol on their campuses. As a result, alcohol abuse has been recognized as one of the leading social and health threats to college students (Goodale 1986; Ingalls 1982; Sherwood 1987). Similarly, more recent attention by the U.S. Department of Education on the use of illicit drugs on campus is increasing the perception of drugs other than alcohol as major threats to college students. Thus, the first two principles of the health belief

model—susceptibility to and severity of the problem—can be seen as driving forces in the development of alcohol and other drug education programs on campus.

The third principle of the health belief model—the perception that alternative behaviors will bring positive benefits—is receiving increased attention among college administrators. Speaking at the First National Conference on Campus Policy Initiatives held in Washington, D.C., Dr. John W. Ryan, president of Indiana University, said, "Effective alcohol education programs and policy initiatives on campus have changed—from something we all wanted but could not afford . . . to something we cannot afford to be without" (Ryan 1986, p. 78). Such pronouncements have helped change the attitudes of campus leaders from benign neglect (Ingalls 1982) to increasing concern for prevention programs (Fischer 1987; Gonzalez 1985). This new level of motivation has been translated into action by the increase in both internal and external stimuli (i.e., "cues to action" in the health belief model) resulting from the changing public attitude toward alcohol use. One particularly strong stimulus has been the growing tendency of the courts to impose third-party liability charges on colleges that permit alcohol-related violations of law or policy that result in injury or death. According to a white paper sponsored by the American Council on Education (1986) and disseminated to college presidents nationwide, "The important point is that every school should appraise its policy in light of the changing temper of public policy toward alcohol abuse" (p. 69). In addition to serving as a strong incentive to action, such liability cases and warnings underscore the severity of the alcohol (and increasingly other drug) problems confronting higher education. Just as the health belief model predicts, colleges are taking numerous steps to protect themselves by implementing educational programs and policy changes (Gadaleto & Anderson 1985; Gonzalez & Broughton 1986; Sherwood 1987).

In a review of health belief model investigations published from 1974 to 1984, as well as from findings of 17 studies conducted before 1974, Janz and Becker (1984) found that the "perceived susceptibility" dimension of the model was particularly important for preventive health behavior. This finding has important implications for using this model to design college alcohol and other drug abuse prevention programs. It suggests that such prevention efforts should emphasize information about personal susceptibility and risks associated with substance abuse. Unless students' perception of personal susceptibility is increased as a result of the programs, the students are not likely to be motivated to take responsibility for using these substances properly. College students tend to be overly optimistic about the probability of being harmed (Weinstein & Lachendro 1982). Yet, such students must be led to realize that they are not invulnerable to physical, psychological, and social harm. They must realize their personal risk from drug use. These realizations are crucial to information-based interventions designed to reduce the use of harmful drugs (Cvetkovich, Earle, Schinke, Gilchrist & Trimble 1987).

In a study to assess the efficacy of health beliefs as predictors of smoking cessation, the researchers found that general health concern and perceived susceptibility were the major predictors (Kaufert et al. 1986). A concept closely related to perceived susceptibility is the risk perceived to be associated with unhealthy practices (Lorig & Laurin 1985). Epidemiological studies have found that perception

of increased risk was associated with declines in reported drug use by high school students (Johnston 1985). Using data from 11 annual surveys of high school seniors (1976-1986), Bachman, Johnston, O'Malley, and Humphreys (1988) found that the increased perception of risks associated with marijuana use resulted in a reduction of marijuana use reported by the students. The researchers suggest that the shifting views about risks may have influenced the increases found in the students' own disapproval of drug use, the disapproval they convey to others, and the disapproval others convey to them.

In challenging the "conventional wisdom" about the inability of information to affect behavior, Bachman et al. (1988, p. 109) concluded that "information about risks and consequences of drug use, communicated by a credible source, can be persuasive and can play an important role in reducing demand, which ultimately must be the most effective means of reducing drug use." This conclusion is supported by empirical research regarding the power of the health belief model to prevent unwanted behavior (Janz & Becker 1984). In a multiple regression analysis of variables predictive of alcohol, marijuana, and cocaine use among college students, perception of risk emerged as the strongest predictor (Gonzalez & Haney 1990). Thus, prevention programs that focus on increasing the perception of risk (associated with alcohol and other drug use) are supported in theory as well as in empirical research.

Another expectancy theory that has been receiving increased attention in the alcohol and other drug education and prevention field is the *social learning theory* (Bandura 1977a, 1977b, 1986). This theory is based on a self-efficacy paradigm. According to the paradigm, behavior change and maintenance are functions of (1) expectations about the outcomes of engaging in a behavior and (2) expectations about one's ability to engage in the behavior. Beliefs about whether a given behavior will lead to a given outcome are termed *outcome expectations*, and beliefs about how capable one is of performing the behavior that leads to those outcomes are termed *efficacy expectations*. Social learning theory places more emphasis on environmental influences than does the health belief model. According to social learning theory, alcohol and other drug use is socially learned, purposeful behavior resulting from the interplay between socioenvironmental factors and personal perceptions (Johnson & Solis 1983).

Prevention approaches based on social learning theory have emphasized developing social and personal skills in youth and young adults to enable them to resist pro-drug environmental and peer pressures (Botvin 1983). Based on the premise that unhealthy behaviors are maintained through periodic social reinforcement and environmental cues, recent prevention programs based on social learning theory have combined two efforts: those to correct perceptions of social norms and those to individualize instruction on peer refusal and social skills (Botvin & Wills 1985).

In general, these "psychosocial" approaches to alcohol and other drug abuse prevention fall into two general categories: (1) programs that focus primarily on social influences believed to promote alcohol and other drug use and (2) training approaches designed to enhance personal and social competence. The social influences method seeks to increase students' resistance to group social pressures to smoke and use

other drugs by making them more aware of these pressures and by helping them develop effective counter-arguments (Hansen 1990). The personal and social competence method helps students develop personal characteristics associated with a low susceptibility to alcohol and other drug abuse. These characteristics include assertiveness skills, effective interpersonal communication skills, and social and decision-making skills. Supporters of this broad-based personal and social competence method (Hawkins, Lishner, Catalano & Howard 1986) have argued that prevention strategies must do more than provide youngsters with the skills necessary to resist pressures to smoke, drink, and use other drugs. Such strategies must also reduce students' motivation to use these substances by increasing their personal and social competence skills and by increasing their perceptions of the risks drugs pose.

Systems Theory

Increasingly, communitywide, comprehensive efforts are being supported for the prevention of alcohol and other drug-related problems. *Communitywide prevention* refers to applying prevention strategies throughout a community in a sustained, highly integrated approach that simultaneously targets and involves diverse people. The theoretical foundations for this approach are drawn from general systems theory; research methodology; health planning; epidemiology; and to a lesser extent, planned-change concepts (Benard 1990). Various communitywide interventions have been developed for many public health problems, ranging from heart disease prevention to health promotion (Johnson & Solis 1983; Perry 1986). The rationale for applying these models to the prevention of alcohol and other drug abuse assumes that there are multiple causes for drug abuse and that prevention efforts focused on a single system will probably fail (Benard 1990).

Theories and models guiding most current, communitywide prevention efforts tend to emphasize personality and coping variables and the ways these factors interact with the environment to contribute to alcohol and other drug problems (Perry 1986). One of the most influential theories in this multilevel approach to prevention is *problem behavior theory* (Jessor & Jessor 1977). Problem behavior theory focuses on three major levels of analysis—the level of behavior, the level of personality, and the level of environment. The theory is based on an awareness that efforts to change behavior can be focused at any or all levels. Problem behavior theory provides the foundation for a comprehensive health-promotion approach to drug abuse prevention proposed by Perry and Jessor (1983). Perry and Jessor proposed a *health behavior theory* that conceptualizes "health" as four interrelated domains: physical, psychological, social, and personal health. Within these domains, health is enhanced by (1) weakening or eliminating behaviors that compromise health and by (2) strengthening or introducing behaviors that enhance health. These two strategies for health promotion can be applied to intrapersonal characteristics, environmental influences, and behavior. In each case, the intervention focuses on weakening or eliminating intrapersonal characteristics, environmental influences, or behaviors that compromise health, while simultaneously introducing or strengthening those that promote health.

Perry and Jessor (1983) underscore the importance of understanding the relationships among behaviors and suggest that research on alcohol and other drug abuse prevention should focus on multiple domains. The intrapersonal domain—composed of attitudes, beliefs, and motivations for health-related behaviors—is seen as an important determinant in the adoption of such behavior. Environmental factors are also thought to affect an individual's health-related behavior. Perry and Jessor's (1983) model proposes two environmental approaches to be used in reducing drug-taking behavior: (1) environmental factors aimed at resisting or avoiding health-compromising behaviors (e.g., reducing the availability of drugs, media campaigns to resist drug use, social and policy sanctions for drug-related activities) and (2) environmental supports for health-enhancing behaviors (e.g., positive peer relations, drug-free activities for students, health/fitness programs). Ideally, each of these components enhances an individual's assessments of his or her personal susceptibility (i.e., taking drugs is serious, dangerous, and potentially lethal), and promotes the viability of alternative behaviors (i.e., I can avoid these problems and be happy doing other things.).

The implications of Perry and Jessor's (1983) model for alcohol and other drug abuse prevention programs and research are substantial. First, it offers a theory-based health promotion intervention relevant to adolescent drug use. Second, it highlights the importance of preventive interventions that seek to implement, simultaneously, the introduction of (or strengthening of) health-enhancing behavior and the elimination of (or weakening of) health-compromising behavior. Perry and Jessor (1983) suggest that research is needed to specify the relative contribution of each strategy and the interactions among the strategies. A third implication of the model is that interventions need to encompass a wider focus than that of individual behavior alone. More attention should be paid to the larger environment, including the social norms and social supports that regulate the occurrence of behavior. Also, changing personality attributes, such as the value an individual places on fitness and his or her general sense of personal competence, should be considered. Finally, the relationships among various health-compromising behaviors seem to require interventions that focus on multiple behavioral targets and are able to assess multiple behavioral outcomes.

An Integrated Theory for the College Campus

The theories discussed above have rarely been applied to alcohol and other drug abuse prevention on the college campus. The few applications of theory to prevention that exist in the literature apply mostly to school-based programs (Amatetti 1987). College-based prevention programs have often been planned on the assumption that raising awareness of the problem is sufficient to change behavior. (See section III; Oblander 1984). A closer examination shows that awareness of the problem may be only a first step; it is perhaps a necessary, but not a sufficient, condition for behavioral change (Cvetkovich et al. 1987; Engs 1977; Goodstadt 1978).

A meaningful theory of alcohol and other drug abuse prevention for higher education must be comprehensive, practical, and testable. A comprehensive theory

must look at (1) the individual and his or her biopsychosocial susceptibilities to alcohol and other drug problems, as well as the individual's knowledge, attitudes, and motivations; and (2) the environment, or the setting in which drinking or other drug use occurs. This includes the campus and community mores that shape usage and policy regulations that govern alcohol or other drug availability and use on campus. Both of these elements—the person and the environment—are interactive and interdependent. The most effective strategies will be those that deal with both elements.

Because of their unique emphasis on intrapersonal, environmental, and person/environment interaction, the health belief model, social learning theory, and problem behavior theory were combined by Gonzalez (1989a) into an integrated theoretical framework for the design of prevention programs and research on the college campus. Each of these theories, as previously discussed, suggests special areas of emphasis which, when combined, can provide a powerful and practical model for program planners and researchers. The Integrated Theoretical Model for Alcohol and Drug Prevention (ITMADP) proposed by Gonzalez (1989a) is the result of such a selective combination and application of principles.

To apply problem behavior theory to alcohol and other drug abuse, one must divide behavior into health-enhancing and health-compromising categories and identify domains for intervention (Perry & Jessor 1985; cited in Amatetti 1987). The two domains emphasized by Gonzalez' ITMADP are person-focused and environmentally focused preventive interventions (e.g., individually oriented skills-building activities, discouragement of health-compromising behaviors through media campaigns).

The health belief model is used to identify personally oriented goals for intervention. The health belief model assumes that an individual's disposition toward abusing alcohol and taking illegal drugs is mediated by three factors: (1) the degree to which individuals believe they are personally susceptible to alcohol and other drug-related problems or dependence, (2) the perceived severity of the consequences of alcohol and other drug abuse, and (3) the degree to which the individuals believe alternative behaviors constitute viable (i.e., perceived benefits outweigh perceived barriers) alternatives to alcohol and other drug abuse. Personally oriented interventions seek to amplify individuals' perceptions of their susceptibility and the severity of alcohol and other drug-related problems in order to discourage health-compromising behaviors; these interventions are also designed to enhance the acceptability of perceived alternative, health-enhancing behaviors.

Before individuals can engage in these behaviors, they need appropriate skills. Needed skills include those for assertiveness, stress management, and interpersonal communication that are necessary to resist environmental pressures effectively and to enhance drug-free participation in activities and relationships. Methods to enhance behavioral skills in these domains are included in the ITMADP to promote an individual's ability to mediate between his or her health beliefs and the external pressures related to alcohol and other drug use. The acquisition of these skills subsequently enhances an individual's efficacy expectations, which, according to social learning theory, are necessary for practicing these skills. Thus, an individual's efforts

are combined with alterations to the surrounding environment to support the student's use of these skills and discourage any health-compromising behaviors.

According to the ITMADP, environmental interventions should include the motivation to protect oneself as proposed in the health belief model. For example, a media campaign could inform students that alcohol and other drug abuse problems can be severe; that even young, healthy persons are susceptible to these problems; and that many alternatives are available to reduce the severity or susceptibility of students to these problems. Both the individually focused and the environmental interventions are more effective when appropriate models (e.g., peers) deliver the message. The ITMADP provides a message, a process, and levels of intervention for structuring preventive campus alcohol and other drug education programs. According to the ITMADP, a consistent message regarding problem severity, personal susceptibility, and viability of options should be provided. The message delivered should be consistent with the principles described earlier. The ITMADP suggests that information alone is not sufficient to achieve behavioral change. Instead, a process by which the skills necessary to resist environmental pressures are developed is also suggested. This means that effective prevention programs are likely to require extensive skills-building activities that provide opportunities for practice and reinforcement in social environments.

The ITMADP suggests that informational campaigns and skills-building activities will require a focus on both the individual and the environment. The dynamic interaction between the person and the environment is seen as crucial to the development and maintenance of behaviors that enhance health and reduce drug use. Although an ideal application of the ITMADP requires a comprehensive, campuswide approach, subcomponents of such a program can be designed in accordance with the model.

For example, an academic drug education course can be designed to include information on the severity of drug abuse problems, the susceptibility of students to these problems, and the viability of alternative behaviors to drug abuse (Gonzalez 1990). The course can include practice in assertiveness, interpersonal skills and out-of-class assignments so that students can practice the skills to become aware of and resist pressures to use drugs. Likewise, a media campaign might be designed to call attention to the susceptibility of college students to alcohol- and drug-related problems. Ideally, all efforts should be coordinated as part of a comprehensive, communitywide campus program (Benard 1990; Perry 1986).

The ITMADP can be used to evaluate the effectiveness of both the immediate and the long-range goals of prevention programs. Environmental changes can be assessed, to determine the programs' effects on the availability of educational messages and opportunities for alternatives to alcohol and other drugs. Increases in the perception of risk can be assessed to determine the immediate impact of the program. Students' acquisition of resistance skills and self-efficacy expectations can be measured to assess the effects of training activities. Ultimately, attitudes and drug use behavior must be measured to determine the long-range outcome of the prevention program.

The interactions among the various predictors of the ITMADP and its long-range outcomes are crucial factors in assessing program effectiveness. For example, if an increase in the perception of risk associated with the use of drugs is achieved, the extent to which peers and institutional policies reinforce these perceptions must be measured. Such a model requires considerable resources and cooperation between researchers and practitioners (Cowen 1978; Gottfredson 1988). Some models have been proposed for creating such a relationship among researchers, program practitioners, and community members (Kelly & Hess 1987; Rappaport 1981). These models have not yet been applied to evaluations of alcohol and other drug abuse prevention programs.

Although some anecdotal evidence suggests that educational programs that impact the individual and the environment can help reduce alcohol and other drug-related problems (Gonzalez 1988b), the cost and complexity of such large-scale efforts make them very difficult to validate empirically. It is not yet known how the environmental and personal variables proposed in the ITMADP interact to motivate people to change their behaviors. The most appropriate mix of emphases for a college population is also unknown. An important research question might be how motivation for change is related to efficacy expectations of students practicing the skills necessary to resist environmental pressures to use alcohol and other drugs. A large-scale, longitudinal, collaborative study of college prevention programs is needed to address these issues.

Summary

Alcohol and other drug abuse prevention programs on the college campus, have generally developed in an atheoretical manner. Most college prevention programs have been based on the assumption that increasing students' knowledge about alcohol and other drugs would lead to an attitude change, resulting in a behavioral change precluding the use of these substances. The assumptions made under this knowledge-attitude-behavior model have been examined empirically and have been found to be seriously flawed (Goodstadt 1978; Miller & Nirenberg 1984; Moskowitz 1986). Nevertheless, college prevention programs and research efforts have continued to develop on the basis of this idea.

A major reason programs continue to develop on the basis of judgments not supported in the research literature is the lack of viable theoretical models regarding campus-based prevention efforts (Gonzalez 1988b; Saltz & Elandt 1986). Several theoretical models emerging in the prevention literature may be useful for college prevention programs and research (Amatetti 1987; Ray, Faegre & Lowery 1990). Although most of these models focus on school-based approaches and on younger populations, expansion of these models to college-age populations is possible. One growing realization in the prevention field, especially on the college campus, is that comprehensive, communitywide approaches are needed (Benard 1990; Gonzalez 1988a; Holder 1984; Kumpfer, Moskowitz, Whiteside & Klitzner 1986; Wallack 1984). It appears that a long-term, systems approach that addresses the relationships among individual and social factors is necessary for effective prevention.

Appropriate theoretical and research models are needed to ascertain the most effective combinations of interventions and the most productive mix of emphases for specific populations. It cannot be assumed that generic program models will be equally effective with different populations. Most prevention efforts today are being geared to preventing the initial use of alcohol and other drugs among young people (DuPont 1990). The prevention of initial use of cocaine may be an appropriate goal for college students, but it would not be an appropriate goal regarding alcohol or marijuana use. The risk of initiation into alcohol and marijuana use is highest for young people before they reach college age, but the levels of consumption of all these substances is highest for students between the ages of 17 and 22 (Kandel & Logan 1984). Thus, prevention goals that may be appropriate for a school-age population may not be appropriate for a college-age population.

Theory-driven, targeted research can help answer a variety of questions. Comprehensive efforts must be defined as more than a conglomerate of different activities. Program activities in a comprehensive effort must be carefully planned to complement each other and to provide the appropriate level of emphasis to specific populations. Empirically tested theory provides a framework for cost-effective program design and evaluation. Such theory-based efforts would not only enhance program outcomes but also advance the knowledge base for further program development.

The ITMADP framework proposed by the author (Gonzalez 1989a) provides an integrated model for program planning and research to prevent alcohol and other drug-related problems on the college campus. The practical aspects of the ITMADP are evidenced by its applicability to planning and evaluation of preventive educational efforts at various levels of intervention (Gonzalez 1990; Gonzalez & Haney 1990); but the model still needs to be applied and evaluated in a comprehensive, campuswide approach.

Models in addition to the ITMADP are needed. Application of theoretical models being developed for younger populations and communities-at-large must be tested on the college campus. Although several promising approaches to alcohol and other drug abuse prevention are emerging in the research literature (Ray et al. 1990), it cannot be assumed that these models will apply to the college campus. As Kuh and Whitt (1988) point out, American college campuses are characterized by a unique culture that significantly affects the lives of individual students. An understanding of this culture is essential to preventing alcohol and other drug-related problems on campus. Until appropriate models are developed and tested empirically, programs will continue to be developed in a trial-and-error manner. Such an approach can be very costly and ineffectual.

Checklist on Theories, Dominant Models, and the Need for Applied Research

- ☐ Does your institution have an alcohol and other drug prevention program that is theory-based?
- ☐ Does your program theory examine the individual's susceptibility to alcohol and other drug problems as well as the environment or setting in which drinking occurs?
- ☐ Does your program theory examine the individual's reasons for not drinking or for drinking moderately as well as the environmental settings that promote abstinence or moderation?
- ☐ Is your program theory practical and testable?
- ☐ If your program is not based on theory, what steps do you need to take on your campus to develop a theory that is comprehensive, practical, and testable?
- ☐ Does your campus have a long-term systems approach for prevention that addresses relationships among individual and social factors?

References

Albert, W.G., & Simpson, R.I. (1985). Evaluating an educational program for the prevention of impaired driving among grade 11 students. Journal of Drug Education, 15, 57-71.

Amatetti, S.L. (1987). A prevention primer: Putting theory to work in the classroom. Alcohol, Health and Research World, 11(4), 38-43.

American Council on Education (1986). Universities, colleges and alcohol: An overview of tort liability issues. In Proceedings of the First National Conference on Campus Alcohol Policy Initiatives (pp. 63-70). Denver, CO: BACCHUS of the U.S., Inc.

Bachman, J.G., Johnston, L.D., O'Malley, P.M., & Humphreys, R.N. (1988, March). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. Journal of Health and Social Behavior, 29, 92-112.

Bandura, A. (1977a). Social learning theory. Englewood Cliffs, NJ: Prentice Hall.

_____ (1977b). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

_____ (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Benard, B. (1990). An overview of community-based prevention. In Ray, Faegre, & Lowery (Eds.), Prevention Research Findings: 1988 (OSAP Prevention Monograph No. 3, pp. 126-147). Rockville, MD: Office of Substance Abuse Prevention.

Botvin, G.J. (1983). Prevention of adolescent substance abuse through the development of personal and social competence. In T.J. Glynn, C.G. Leukefeld & J.P. Ludford (Eds.), Preventing adolescent drug abuse (Research Monograph No. 47, pp. 115-140). Rockville, MD: National Institute on Drug Abuse.

Botvin, G.J., & Wills, T.A. (1985). Personal and social skills training: Cognitive-behavioral approaches to substance abuse prevention. In C.S. Bell and R. Battjes (Eds.), Prevention research: Deterring drug abuse among children and adolescents (Research Monograph No. 63, pp. 8-49). Rockville, MD: National Institute on Drug Abuse.

Braucht, N.B., & Braucht, B. (1984). Prevention of problem drinking among youth: Evaluation of educational strategies. In P.M. Miller & T.D. Nerenberg (Eds.), Prevention of Alcohol Abuse. New York: Plenum Press.

Bruun, K., Edwards, G., Lumio, M., Makela, K., Pan, L., Popham, R.E., Room, R., Schmidt, W., Skog, O.J., Sulkunen, P., & Ostenberg, E. (1975). Alcohol control policies in public health perspective. Helsinki: Finnish Foundation for Alcohol Studies.

Bukoski, W.J., (1986). School-based substance abuse prevention: A review of program research. Journal of Children in Contemporary Society, 18, 93-115.

Cellucci, T. (1984). The prevention of alcohol problems: Conceptual and methodological issues. In P.M. Miller & T.D. Nirenberg (Eds.), Prevention of alcohol abuse (pp. 15-53). New York: Plenum Press.

Cook, P., & Tauchen, G. (1984). The effect of minimum drinking age legislation on youthful auto fatalities, 1970-1977. Journal of Legal Studies, 13, 169-190.

Cowen, E.L. (1978). Some problems in community program evaluation research. Journal of Consulting and Clinical Psychology, 46, 792-805.

Cvetkovich, G., Earle, T.C., Schinke, S.P., Gilchrist, L.D., & Trimble, J.E. (1987). Child and adolescent drug use: A judgment and information processing perspective to health-behavior interventions. Journal of Drug Education, 17, 295-313.

DuMouchel, W., Williams, A., & Zador, P. (1987). Raising the alcohol purchase age: Its effects on fatal vehicle crashes in 26 states. Journal of Legal Studies, 16, 249-266.

DuPont, R.L., (1990). Stopping alcohol and other drug use before it starts: The future of prevention (OSAP Research Monograph No. 1). Rockville, MD: Office of Substance Abuse Prevention.

Engs, R.C. (1977). Let's look before we leap: The cognitive and behavioral evaluation of a university alcohol education program. Journal of Alcohol and Drug Education, 22, 39-48.

Fischer, J.M. (1987). A historical perspective: Alcohol abuse and alcoholism in America and our campuses. In J.S. Sherwood (Ed.), Alcohol policies and practices on college and university campuses (pp. 1-17). Washington, DC: National Association of Student Personnel Administrators.

Gadaleto, A.F., & Anderson, D.S. (1986). Continued progress: The 1979, 1982, and 1985 college alcohol survey. Journal of College Student Development, 30(6), 492-503.

Galizio, M., & Maisto, S.A. (Eds.) (1985). Determinants of substance abuse: Biological, psychological, and environmental factors. New York: Plenum Press.

Goldman, M.S., Brown, S.A., & Christiansen, R.A. (1987). Expectancy theory: Thinking about drinking. In H.T. Blane & K.I. Leonard (Eds.), Psychological theories of drinking and alcoholism. New York: Guilford Press.

Gonzalez, G.M. (1978). What do you mean - Prevention? Journal of Alcohol and Drug Education, 23, 14-23.

_____ (1985). Alcohol on campus: You must ensure its responsible use. AGB Reports, 27, 24-18.

_____ (1988a). Theory and application of alcohol and drug education as a means of primary prevention on the college campus. In T.M. Rivinus (Ed.), Alcoholism/chemical dependency and the college student. New York: Haworth Press.

_____ (1988b). Should alcohol and drug education be a part of comprehensive prevention policy? The evidence from the college campus. Journal of Drug Issues, 18, 355-365.

_____ (1989a). An integrated theoretical model for alcohol and other drug abuse prevention on the college campus. Journal of College Student Development, 30, 492-503.

_____ (1989b). Effects of raising the drinking age among college students in Florida. College Student Journal, 23, 67-75.

_____ (1990). Effects of a theory-based, peer-focused drug education course. Journal of Counseling & Development, 68, 446-449.

Gonzalez, G.M., & Broughton, E.A. (1985). Status of alcohol policies on campus: A national survey. NASPA Journal, 24, 49-59.

Gonzalez, G.M., & Haney, M.L. (1990). Perceptions of risk as predictors of alcohol, marijuana, and cocaine use among college students. Journal of College Student Development, 31, 313-318.

Goodale, T.G. (Ed.). (1986). Alcohol and the college student (New Directions for Student Services No. 35, pp. 17-33). San Francisco: Jossey-Bass.

Goodstadt, M.S. (1978). Alcohol and drug education models and outcomes. Health Education Monographs, 6, 263-279.

Goodstadt, M.S., & Caleekal-John, A. (1984). Alcohol education programs for university students: A review of their effectiveness. International Journal of the Addictions, 19, 721-741.

Gordis, E. (1988). A perspective on science and public health policy. Public Health Reports, 103, 575-577.

Gottfredson, G.D. (1988). A theory-ridden approach to program evaluation: A method for stimulating researcher-implementer collaboration. American Psychologist, 39, 1101-1112.

Hansen, W.B. (1990). Theory and implementation of the social influence model of primary prevention. In Rey, Faegre, & Lowery (Eds.), Prevention Research Findings: 1988 (OSAP Prevention Monograph No. 3, pp. 93-107). Rockville, MD: Office of Substance Abuse Prevention.

Hawkins, J.D., Lishner, D.M., Catalano, R.F., & Howard, M.D. (1986). Childhood predictors of adolescent substance abuse: Towards an empirically grounded theory. Journal of Children in Contemporary Society. 18, (1 & 2), 1-65.

Hewitt, K. (1976). The whole college catalog about drinking (DHEW Publication No. ADM 77-361). Washington, DC: U.S. Government Printing Office, Superintendent of Documents.

Hingson, R., Scotch, N., Magione, T., Meyers, A., Glantz, L., Heeren, T., Liu, N., Mucatel, M., & Pierce, G. (1983). Impact of legislation raising the legal drinking age in Massachusetts from 18 to 20. American Journal of Public Health, 73, 163-170.

Holder, H. (1984). A systems perspective of alcohol abuse at the community level. In H. Holder and J. Hallan (Eds.), Control issues in alcohol abuse prevention: Local, state and national designs for the '80s (pp. 37-58). Chapel Hill: Human Ecology Institute.

Holder, H.D., & Stoil, M.J. (1988). Beyond prohibition: The public health approach to prevention. Alcohol Health and Research World, 12, 292-297.

Hughes, S.D., & Dodder, R.A. (1986). Raising the minimum drinking age: Short-term effects with college student samples. Journal of Drug Issues, 16, 609-620.

Ingalls, Z. (1982, July 21). Higher education's drinking problem. The Chronicle of Higher Education, p. 1.

Iverson, D.C. (1978). Utilizing a health behavior model to design drug education/prevention programs. Journal of Drug Education, 8, 279-287.

Janz, N.K., & Becker, M.H. (1984). The health belief model: A decade later. Health Education Quarterly. 11, 1-47.

Jessor, R., & Jessor, S.L. (1977). Problem behavior and psychosocial development: A longitudinal study of youth. New York: Academic Press.

Johnson, C.A., & Solis, J. (1983). Comprehensive community program for drug abuse prevention: Implications of the community heart disease prevention programs for future research. In T.J. Glynn, C.G. Gleukefeld, & J.P. Ludford (Eds.), Preventing

adolescent drug abuse (Research Monograph No. 47, pp. 76-114). Rockville,MD: National Institute on Drug Abuse.

Johnston, L.D. (1985). The etiology and prevention of substance abuse: What can we learn from recent historical changes? In C.L. Jones & R.J. Battjes (Eds.), Etiology of drug abuse: Implications for Research (Research Monograph No. 56). Rockville, MD: National Institute on Drug Abuse.

Kandel, D.B., & Logan, J.A. (1984). Patterns of drug use from adolescence to young adulthood: Periods of risk for initiation, continued use and discontinuation. American Journal of Public Health, 74, 660-666.

Kaufert, J.M., Rabkin, S.W., Syrotuik, J., Boyko, E., & Shane, F. (1986). Health beliefs as predictors of success of alternate modalities of smoking cessation: Results of a controlled trial. Journal of Behavioral Medicine, 9, 475-489.

Kelly, J.G., & Hess, R.E. (1987). The ecology of prevention: Illustrating mental health consultation. NY: Haworth Press.

Kinder, B.N., Pape, N.E., & Walfish, S. (1980). Drug and alcohol education programs: A review of outcome studies. International Journal of the Addictions, 15, 1035-1054.

Kleinot, M.C., & Rogers, R.N. (1982). Identifying effective components of alcohol abuse prevention programs. Journal of Studies on Alcohol, 43, 802-811.

Kraft, D.P. (1976, Summer). College students and alcohol: The 50 plus 12 project. Alcohol, Health and Research World, 10-14.

_____ (1977). Follow-up of a federal effort to encourage campus alcohol abuse prevention programs. Journal of the American College Health Association, 26, 150-153.

Kuh, G.D., & Whitt, E.J. (1988). The invisible tapestry: Culture in American colleges and universities. (AAHE-ERIC/Higher Education Research Report No. 1). Washington, DC: American Association for Higher Education.

Kumpfer, K.L., Moskowitz, J., Whiteside, H.O., & Klitzner, M. (1986). Future issues and promising directions in the prevention of substance abuse among youth. Journal of Children in Contemporary Society, 18, 249-278.

Lettieri, D.J., Sayers, M., & Pearson, H.W. (Eds.). (1980). Theories on drug abuse. Rockville, MD: National Institute on Drug Abuse.

Lorig, K., & Laurin, J. (1985). Some notions about assumptions underlying health education. Health Education Quarterly, 12, 231-243.

Magner, D.K. (1988, November 9). Officials involved in substance abuse by students search for "what works." The Chronicle of Higher Education, p. A35.

Maiman, L.A., & Becker, M.H. (1974). The health belief model: Origins and correlates in psychological theory. Health Education Monographs, 2, 336-353.

Miller, P.M., & Nirenberg, T.D. (Eds.). (1984). Prevention of alcohol abuse. New York: Plenum Press.

Moore, M.H., & Gerstein, D.D. (1981). Alcohol and public policy: Beyond the shadow of prohibition. Washington, DC: National Academy Press.

Moskowitz, J.M. (1986). The primary prevention of alcohol problems: A critical review of the research literature. Berkeley, CA: Prevention Research Center.

National Institute on Alcohol Abuse and Alcoholism. (1984). Fifth special report to the U.S. Congress on alcohol and health (DHHS Publication No. ADM 84-1291). Washington, DC: U.S. Government Printing Office, Superintendent of Documents.

_____ (1987). Sixth special report to the U.S. Congress on alcohol and health (DHHS Publication No. ADM 87-1519). Rockville, MD: NIDA.

Nirenberg, T.D., & Miller, P.M. (1984). History and overview of the prevention of alcohol abuse. In P.M. Miller & T.D. Nirenberg (Eds.), Prevention of alcohol abuse. New York: Plenum Press.

Oblander, F.W. (1984). Effective alcohol education strategies. ACU-I Bulletin, 52, 17-25.

Perkins, H.W., & Berkowitz, A.D. (in press). Stability and contradiction in college students' drinking following a drinking-age law change. Journal of Alcohol and Drug Education.

Perry, C.L. (1986). Community-wide health promotion and drug abuse prevention. Journal of School Health, 56, 359-363.

Perry, C.L., & Jessor, R. (1983). Doing the cube: Preventing drug abuse through adolescent health promotion. In T.J. Glynn, C.G. Leukefeld, & J.P. Ludford (Eds.), Preventing adolescent drug abuse: Intervention strategies (Research Monograph No. 47). Rockville, MD: National Institute on Drug Abuse.

_____ (1985). The concept of health promotion and the prevention of adolescent drug abuse. Health Education Quarterly, 12, 169-184.

Portnoy, B. (1980). Effects of a controlled-usage alcohol education program based on the health belief model. Journal of Drug Education, 10, 181-195.

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. American Journal of Community Psychology, 9, 1-26.

Ray, K.H., Faegre, C.L., & Lowery, P. (Eds.). (1990). Prevention research findings: 1988 (OSAP Prevention Research Monograph No. 3). Rockville, MD: Office of Substance Abuse Prevention.

Rosenstock, I.M. (1974). Historical origins of the health belief model. Health Education Monograph, 2, 328-335.

Rotter, J.B. (1954). Social learning and clinical psychology. New York: Prentice Hall.

Ryan, J.W. (1986). Conference keynote address. Proceedings of the first national conference on campus alcohol policy initiatives (pp. 77-80). Denver, CO: BACCHUS of the U.S., Inc.

Saltz, R., & Elandt, D. (1986). College student drinking studies, 1976-1985. Contemporary Drug Problems, 117-159.

Sandeen, C.A. (1988). Student affairs: Issues, problems and trends. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Schaps, E., DiBartolo, R., Moskowitz, J., Palley, C., & Churgin, S. (1980). Primary prevention evaluation research: A review of 127 impact studies. Journal of Drug Issues, 11, 17-43.

Sherwood, J.S. (Ed.). (1987). Alcohol policies and practices on college and university campuses (NASPA Monograph No. 7). Washington, DC: National Association of Student Personnel Administrators.

United States Congress. (1988, October 21). National drug control program. Congressional Record - House.

Vingilis, E., & Smart, R. (1981). Effects of raising the drinking age in Ontario. British Journal of Addiction, 76, 415-424.

Wagenaar, A. (1983). Alcohol, young drivers and traffic accidents: Effects of minimum age laws. Lexington, MA: Lexington Books.

Wallack, L. (1984). Practical issues, ethical concerns and future directions in the prevention of alcohol-related problems. Journal of Primary Prevention, 4, 199-224.

Weinstein, N.D., & Lachendro, E. (1982). Egocentrism as a source of unrealistic optimism. Personality and Social Psychology Bulletin, 195-200.

Widick, C.P., Knefelkamp, L., & Parker, C. (1980). Student development. In U. Delworth, G.R. Hansen, & Associates (Eds.), Student services: A handbook for the profession. San Francisco: Jossey-Bass.

IV

Current Knowledge in Prevention of Alcohol and Other Drug Abuse[2]

Introduction

During the last 30 years, the amount of research and theory related to the prevention of alcohol and other drug use has increased substantially. As noted by Gonzalez in section III, this increase in attention has not always been well focused or systematic. Most alcohol and drug-related studies have simply described current rates and patterns of use. A second category of studies has focused on identifying precursors and predictors of adolescents' drinking and drug use. These etiological studies, for the most part, have been fragmented and atheoretical. In general, this research has not provided practitioners with consistent direction to design effective alcohol and other drug prevention programs. Thus, the development of preventive interventions has proceeded somewhat separately from that of descriptive etiological research.

At the national level, the most comprehensive and influential prevention research to date has addressed cigarette smoking among junior and senior high school students. Despite the fact that alcohol is consumed and abused by more students than any other substance (Johnston, O'Malley & Bachman 1989), prevention of alcohol use among youth has received considerably less systematic study. This dearth of studies may be due to a cultural bias that does not define alcohol as a drug but rather views alcohol consumption as an accepted aspect of social behavior (instead of a significant health hazard). Studies over the past 20 years reveal that, regardless of structure or approach, preventive interventions to date have been least effective in modifying rates of alcohol use (Moskowitz 1989; Rundall & Bruvold 1988).

This article reviews the development of current approaches to alcohol and other drug prevention; what has been learned in the last 30 years about the effectiveness of these programs; current directions in the prevention of alcohol and other drug use; and critical elements in building effective prevention programs for the future as suggested by theory, research, and practical experience.

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The Development of Current Prevention Strategies

Whether explicit or implicit, a progression of different assumptions can be detected underpinning strategies developed in the last 30 years to reduce or eliminate alcohol and other drug use among young people (Jones 1990). Each of the general strategies described below encompasses its predecessor. Each strategy is still in use. The strategies grow increasingly complex as prevention researchers recognize and attempt to address the increasingly broad range of influences that are shown to affect alcohol and other drug use.

Overview of Existing Prevention Strategies

The earliest preventive interventions were based on an atheoretical and somewhat simplistic faith in human rationality. These programs were based on an assumption that if individuals were given accurate facts about the harmful effects of alcohol and other drugs, those individuals—regardless of their circumstances—would reduce or avoid drug use because it was in their own best interest to do so. Research has not supported this straightforward idea of rational self-interest. Evaluations of this generic *information-only* or *awareness model* have led to one of the very few universally agreed-upon facts in the prevention field. That is, for the vast majority of individuals, simple awareness through passive receipt of health information is not enough to lead them to alter their present behavior or reduce their present or future use of drugs (Goodstadt 1986; Polich, Ellickson, Reuter & Kahan 1984; Rundall & Bruvold 1988; Tobler 1986).

Another early strategy for alcohol and drug prevention was based on the *individual deficiencies model* (also called the *attitude change model*). This model is based on an assumption that individuals use alcohol and other drugs primarily to compensate for lack of self-esteem, lack of effective decision-making skills, or lack of positive personal values. Prevention programming, therefore, focuses on addressing these psychological deficits. *Affective education* is one name often given to this preventive strategy. The content of such programs includes information about the effects of alcohol and drugs but focuses primarily on activities to build self-confidence, self-reliance, and a positive self-image. Values clarification is a frequent focus. Exercises focus on making "good" (that is, drug-free) decisions about future personal behavior. The goal of such efforts is to change the attitude of the individual toward himself or herself and toward drug use. It is assumed that, with the protection of anti-drug attitudes, drug-free behavior will naturally follow.

Although this rationale is appealing, evaluations of programs based on affective education, values clarification, attitude change, and decision making have not provided much support for the effectiveness of this approach (Mauss, Hopkins, Weisheit & Kearney 1988; Schaps, DiBartolo, Moskowitz, Palley & Churgin 1981; Tobler 1986). First, attitudes have proven to be extremely resistant to change (Rundall & Bruvold 1988). Second, a great deal of research has shown that attitudes do not have a predictable relationship—and sometimes have no relationship at all—to behavior (Wiker 1969). Two persuasive studies in the 1980s showed that significant positive

changes in alcohol and other drug use behavior can occur with no detectable change in adolescents' attitudes (Resnick 1983; Tobler 1986). Particularly for still-developing youth and adolescents, attitudes are not the most powerful influences that shape or control behavior. A recent paper on adolescent behavior suggests why values clarification and decision-making training alone may not benefit many youth.

> The [student] who learns systematic decision making may make a health decision but be unable to later carry it out under environmental pressure. Learning how rational decisions are made (i.e., "I have decided not to sleep with anyone until I am married") may be easily achieved in a classroom setting. Subsequent ability to behaviorally resist the passionate pressure to sleep with a boyfriend or girlfriend may be, however, much more difficult (Duryea, Ransom & English 1990, p. 176).

Although the example here concerns sexual behavior, it is clear that alcohol and drug use, too, are strongly affected by social context, biological and emotional needs, and both real and imaginary pressure from peers and others. Interventions aimed solely at developing healthy attitudes do not take such environmental pressures into account.

The best articulated, best tested, and most elegant theory now available to drug prevention programmers is Bandura's *social learning theory*. This theory shows clearly why changing an individual student's attitudes is not enough to bring about effective and lasting avoidance of alcohol and other drug use (Bandura 1986; 1989). Social cognitive theory is based on the idea that human behavior is the result of a complex and reciprocal interaction between both personal and environmental factors. According to this theory, a person's beliefs, thinking processes (cognition), and emotions—which taken together are what we call attitudes—both result from and influence his or her external environment. A given behavior results from the combined effects of the environment and an individual's attitudes. Thus, even when an individual's attitudes remain stable (and they rarely do, particularly when the individual is still growing and developing), different environments and different situations can result in very different behavior from that same individual.

In the mid-1970s, prevention as a field of scholarly study entered a period of rapid development. For the first time, relatively sophisticated theory and findings from research in social and cognitive psychology, including the work of Bandura, and from persuasion and communications theory were used to plan new approaches to alcohol and drug prevention. Interest in using tested theories about human behavior in designing prevention programs grew from an expanding appreciation of the complexity of factors that influence human behavior. Developmental research shows that normal development leads children to turn increasingly to peers as they grow into adolescence. In addition, survey data clearly show that youths' alcohol and other drug use is unmistakably and strongly associated with the alcohol and other drug use occurring among friends and peers in social settings.

The prevention approach that developed in the late 1970s and early 1980s is based on a *social influences model*. The underlying assumption is that alcohol and other drug use for young people is primarily a social behavior strongly influenced by

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social motives, including both overt and covert pressure from friends and others to conform to group norms. The need to fit in and be accepted by peers is strong in adolescence. As social contexts change, all youth—not simply those who lack self-esteem or decision-making skills—are susceptible to being influenced (or pressured through actual or imagined social norms) into using alcohol and other drugs regardless of those youths' previous attitudes towards these substances. The work of McGuire (1961), Bandura (1977), and followers of B. F. Skinner and behavior modification researchers (Kazdin 1975) all contributed to the design of this new preventive approach to address the effects of social pressure.

In general, the preventive strategy developed from the social influences model is to "inoculate" youth against the effects of social pressure by equipping them with the cognitive and behavioral skills to recognize and resist such pressure. Although specific inoculation programs vary in emphasis, interventions based on this strategy have had five core components:

1. Information about the immediate, negative, social, and physiological consequences of alcohol and other drug use.

2. Development of skills to recognize overt and covert pressure to use alcohol and other drugs, including skill in recognizing peer, parent, and mass media influences.

3. Correction of falsely inflated beliefs about the prevalence of drinking and other substance use among same-age peers.

4. Behavioral skills training involving modeling, rehearsal, and reinforcement of skills for resisting influences to use drugs.

5. Securing a public commitment from youth to try the new behavioral skills outside of the classroom or training setting (Arkin, Roemhild, Johnson, Luepker & Murray 1981; Battjes 1985; Botvin, Baker, Renick, Filazzola & Botvin 1984; Duryea 1983, 1984; Evans, Rozelle, Mittlemark, Hansen, Bane & Harvis 1978; Flay, d'Avernas, Best, Kersell & Ryan 1983; Glynn, Leukefeld & Ludford 1983; McAlister, Perry, Killen, Slinkard & Maccoby 1980; Schinke & Gilchrist 1983).

Evaluations of the social influences/social inoculation approach provide encouraging results. A rigorous comparison of 143 adolescent drug prevention programs found clear evidence of the superior success of programs that employed skills training with an emphasis on recognizing and managing peer pressure (Tobler 1986). Although the skills-based social inoculation programs that Tobler reviewed were first developed to reduce cigarette smoking, the approach proved to have positive effects on students' use of alcohol and other drugs as well. The study also found "solid evidence exists for discontinuing" programs that provide only information or only affective education to change attitudes" (Tobler 1986, p. 559).

Most tests of the inoculation strategy used in alcohol and other drug prevention efforts have occurred in junior and senior high school classrooms. This preventive approach of incorporating direct cognitive and behavioral skills training and behavioral skills practice can achieve at least short-term success in reducing the overall rates of cigarette, alcohol, and marijuana use among school-attending youth who are not already heavy users of these substances (Battjes 1985; Bell & Battjes 1985). One important criticism of the inoculation strategy raised by evaluation researchers is that inoculation interventions by themselves often seem to produce only short-lived or temporary effects. Without regular refresher programs or boosters, effects of successful school-based inoculation training programs have been found to disappear after 1 to 2 years (Flay 1985; Iverson & Kolbe 1983; Walter, Hofman & Connelly et al. 1985).

Finally, although programs using the social inoculation strategy have produced unmistakably positive effects in reducing high school students' use of cigarettes and marijuana, the success of the strategy in reducing alcohol use is less clear. It is agreed that social inoculation programs can successfully correct misinformation about the prevalence of drinking among same-age peers, can teach youth to recognize social pressure, and can teach the cognitive and behavioral skills necessary to resist the pressure to drink. However, critics state that correcting this misinformation does not reduce students' drinking (Mauss et al. 1988; Moskowitz 1989). As one of the most critical research groups concluded,

> these variables make such a small independent contribution to drinking behavior that it is unlikely [that] even a highly successful classroom intervention directed at these variables would do much to prevent alcohol use or abuse by youth (Mauss et al. 1989, p. 51).

In summarizing the historical development of alcohol and other drug prevention approaches, it is apparent that the information-only, individual deficiencies/attitude change, and social inoculation methods have relied heavily on theories from clinical, social, and educational psychology. The net effect has been that these prevention models and the preventive intervention strategies emerging from them have aimed at influencing only individuals and individual behavior and not the wider environment or the social context in which behavior occurs. Although positive effects from these models, particularly the inoculation model, have been documented, these prevention strategies have been open to the criticism that they are only effective with some youth—usually those at lowest risk for problem substance use—and that the effectiveness is often short lived.

Current Directions in Prevention Theory

The most recent developments in prevention theory and program development involve recognition of the critical importance of the environment in shaping and maintaining individuals' behavior. This emerging preventive approach might be called the *ecological* or *person-in-environment model.* Interventions based on this model

have multiple components and are designed to address both individuals and the policies, practices, and social norms that affect them on campus or in the community. The following activities are conducted to influence as many components of the individual's environment as possible: dissemination of drug information; cognitive and behavioral skills training for youth, parents, and professionals; mass media programming; development of grass-roots citizen interest groups; leadership training for key organization and community officials; policy analysis and reformulation; and many other activities. These events are incorporated in different ways with varying target groups at different times in a comprehensive, communitywide prevention campaign. College campuses may be uniquely suited to the person-in-environment approach because they are relatively self-contained environments. In many instances, students live on campus, work on campus (either studying or in paid employment or both), and socialize on campus. There are few other environments that encompass (and thus may address) so many important aspects of an individual's life concurrently.

Prevention activities based on the comprehensive, person-in-environment model incorporate a broad range of theories. Although the social influences/social inoculation model draws heavily on the field of psychology (with its emphasis on individual behavior), the person-in-environment approach draws heavily on public health and organizational change theory. The approach draws from social marketing theory, organizational development theory, community organization theory, and diffusion-of-innovations theory (Bracht 1990; Glanz, Lewis & Rimer 1990; Green & McAlister 1984; Lefebvre & Flora 1988; Parcel, Simons-Morton & Kolbe 1988; Rogers 1983).

A review of prevention programs from the past 30 years shows that no single approach has been found that works in all environments and with all populations. The current thinking is that the best approach is to combine a variety of theories and methods to achieve the desired goal (see, for example, Gonzalez' ITMADP model discussed in section III). The person-in-environment model blends theories of individual behavioral change with theories of organizational change to accomplish broad-scale, and potentially more enduring, effects (Gilchrist, in press). The aims of these programs are to bring about and sustain individual behavioral change with changes in the social or organizational environment. Thus, these preventive approaches incorporate interventions that are long term and sustained, rather than short term and time limited. In addition, rather than relying on a single set of prescribed procedures and materials, these programs make use of a phased menu of different intervention options that can be combined or tailored to fit specific locales and circumstances (Bracht 1990; Glynn, Boyd & Gruman 1990).

The development of person-in-environment alcohol and other drug prevention programs are but one segment of a rapidly expanding field of comprehensive health promotion and disease prevention. Experts in this field, as well as drug prevention specialists, have become increasingly concerned with human ecology (the influence of the social environment on behaviors) and with the validity of programs designed to change human behavior. As illustrated in the discussion on the person-in-environment approach, the ecological perspective "assumes that appropriate changes in the social environment will produce changes in individuals, and that the support of individuals in the population is essential for implementing environmental changes" (McLeroy, Bibeau,

Steckler, & Glanz 1988, p. 351). Ecological views of campus environments are highlighted by Kuh in section V.

As noted by Glanz et al. (1990), five distinct sets of factors interact in complementary ways in the ecological perspective:

1. Intrapersonal factors—characteristics of individuals themselves, such as knowledge, attitudes, behavior, self-concept, learning history, and skills.

2. Interpersonal processes and primary groups—formal and informal social network and social support systems, including family, work group, living group, and friendship networks.

3. Institutional factors—social institutions to which individuals belong have particular organizational characteristics and formal and informal rules and regulations for operation.

4. Community factors—relationships among organizations, institutions, and formal and informal networks within defined boundaries.

5. Public policy—local, state, and national laws and policies.

Given limited resources, it may not be possible for a single prevention campaign to address every level or set of factors. On the other hand, prevention activities too narrowly focused on a single level run a high risk of obtaining only transient results, at best. In his comprehensive review of approaches to preventing alcohol problems and abuse, Moskowitz (1989) endorses a careful examination of policy-level institutional changes on norms and behaviors associated with problem alcohol use to see if such changes can prevent alcohol and other drug problems.

> If one could create a social environment where positive social influences regarding alcohol use predominated, then there would be little need to attempt the difficult task of trying to train the ultimate social animal to resist social influences as is currently in vogue in many "just say no"-type prevention programs (Moskowitz 1989, p. 78).

In fact, several research groups have noted that regardless of the prevention model ostensibly being tested, all successful drug prevention programs may have been aided by the growing, societywide disapproval of drug use, particularly cigarette and marijuana use (McAlister, Perry & Maccoby 1979; Pentz et al. 1989). Data from a recent national school-based sample of adolescents strongly suggest that news media and national events do affect youths' perceptions of the personal risks involved in cocaine and marijuana use and their recognition of social disapproval for using these substances. These changed perceptions have led to a steady decline in national use rates of cocaine, marijuana, and cigarettes among adolescents (Bachman, Johnston, O'Malley & Humphreys 1988; Bachman, Johnston & O'Malley, in press). These authors state:

> Recent evidence suggests that large proportions of youth and young adults *do* pay attention to new information about drugs, especially about the risks involved, and they moderate their behavior accordingly (Bachman, Johnston & O'Malley, in press, p. 21).

In one of the few studies providing information about older students' perceptions of risk from alcohol, Gonzalez and Haney (1990) found a strong relationship between college students' perceptions of personal risk of harm from alcohol and lower alcohol use. Recent, well-designed studies show that providing realistic information about risks and consequences of alcohol and other drugs as an important ingredient in changing social (or local community) opinion and thus the social environment in which personal behavior (such as alcohol and other drug use) takes place (Gonzalez 1989, 1990; Lorig & Laurin 1985).

Research Support for the Ecological Model

To date, the most ambitious and best known demonstration of a person-in-environment approach to drug prevention is the ongoing Midwestern Prevention Project (Johnson et al., in press; Pentz et al. 1989). Referred to locally as Project STAR (Students Taught Awareness and Resistance), the aim is to influence several layers of a community at once to build widespread environmental change. This project, launched with both federal and local private foundation funding in neighborhoods in Kansas City and Indianapolis, combines mass media programming, teacher training, school-based cognitive and behavioral skills training for children, parent education, community organizing activities (including training key community leaders in drug-prevention strategies and methods), and community health policy analysis and change activities. At its 3-year evaluation, organizers of the project reported sustained and apparently stable reductions in high school students' use of cigarettes and marijuana (Pentz et al. 1989). Program effects on alcohol use were less clear. In response to these mid-program evaluation results, the prevention programming now includes "enhanced alcohol content designed especially to deal with the relative normative nature of alcohol use in the general society" (Johnson et al., in press). The success of the Midwestern Prevention Program to date has been attributed to its ability to orchestrate simultaneous changes in several important channels of influence on youths' behavior (e.g., school, parents, media, community norms; Johnson et al., in press). Each channel is assumed to trigger and to reward skills and other learning related to drug-free behavior acquired through it or some other channel.

One of the few college-based ecological programs in prevention literature is described in Kraft (1984). The overall goal of this University of Massachusetts program was "to create a campus environment that encouraged responsible use of beverage alcohol and discouraged irresponsible drinking behaviors" (p. 328). The program was planned to address the following three kinds of factors that influence drinking behavior:

1. Predisposing factors—knowledge, attitudes, and values.

2. Enabling factors—"the availability and accessibility of services or skills that influence whether or not the person could prevent the problem behavior" (p. 329); for example, assertiveness skills to refuse a drink and availability of public transportation to avoid driving while intoxicated.

3. Reinforcing factors—supporting desirable behavior once it is acquired; for example, developing realistic and enforceable regulations governing alcohol use and fostering a climate of support among campus staff and other community groups for norms to shun driving after drinking.

All of the multiple intervention activities were designed to change at least one predisposing, enabling, or reinforcing factor in a positive direction. Interventions included broad-scale informational approaches, including the use of campus media; intensive educational approaches (direct training for individual student groups); and community development efforts, including training for staff, student leaders, faculty, and administrative groups.

After 4 years, results showed that only those intensive educational approaches in which students received direct training in multiple sessions over time resulted in actual changes in drinking behaviors. The program planners concluded that particular attention to enabling and reinforcing factors (as opposed to emphasis on predisposing knowledge, attitudes, beliefs, and values) was critical, and that a combined and phased use of educational and regulatory (i.e., policy) approaches were useful to initiate and sustain behavioral change. The planners' original assumption that intensive educational activities with a 5-10 percent cross-section of the students each year would spread out to produce campuswide effects proved false. They concluded that more multi-session, intensive efforts were needed that were specially tailored to the high-risk (that is, heavier drinking) groups. These high-risk groups included fraternity members, all-male dormitory residents, first-year student dormitory residents, and residents of high-rise dormitories.

Issues In Designing Effective Prevention Programs

Scholarly work in the last decade has increasingly supported the notion that alcohol and drug prevention planners cannot expect to rely on a single "canned" prevention curriculum. Many factors affect a prevention program's success. A program developed in one locale or environment may not translate well to another. Scholars' response to this problem of limited transferability has been to derive general principles that appear essential to initiating successful prevention programs regardless of setting or environment. Increasingly, studies identify general principles that underlie conditions promoting a design that results in enduring, desired changes at both the organizational and the individual behavior levels. This work strongly suggests that integrating organizational change strategies with individual change strategies is critical for a focused, sustained, and effective prevention effort. The remainder of this section describes what is currently known about such integration efforts and about one final,

but often neglected, principle—that of gaining clarity about a prevention program's mission and goals.

Integrating Organizational and Individual Change Strategies

In the last 15 years, researchers have isolated predictable steps that characterize innovation and change within multilevel organizational or community systems (Argyris 1987; Bracht 1990; Charter et al. 1973; Goodman & Steckler 1990; Green & McAlister 1984; Kolbe 1986; Kraft 1984; Porras & Hoffer 1986; Rogers 1983). These studies provide evidence for a general model of change as it occurs in organizational systems. This model consists of becoming aware of a problem; analyzing current practices, resources, and options; adopting a strategy or plan for change; implementing the plan; and then examining the success of the original plan and its implementation. This section provides an illustration of how organizational change strategies can be applied to building organizational consensus, receptivity, and resources for learning activities to prevent substance abuse problems.

Successful social change of any type—whether drug related or not—rests on the inclusion of all concerned constituencies in both the planning and the implementation processes (Argyris 1987; Green 1986; Kettner, Daley & Nichols 1985; Rothman 1970). Parcel and his colleagues (Parcel et al. 1987; Parcel, Simon-Morton & Kolbe 1988; Simons-Morton et al., in press) used research on innovation and change in schools to create a model with four sequential phases. This model deliberately integrates several organizational change strategies with individual student learning strategies. The four phases are

1. Institutional commitment.

2. Alterations in policies and practices.

3. Alterations in roles and actions of staff.

4. Student learning activities (Parcel, Simons-Morton & Kolbe 1988, p. 441).

Parcel and his colleagues argue that once a need has been identified, commitment from the highest level of an organization is a necessary condition for any programmatic innovation. "Sustained administrative support is so critical that proceeding with planning without administrative support is likely to be fatal" (Parcel, Simons-Morton & Kolbe 1988, p. 441). A key element in the person-in-environment prevention programs tested to date has been the presence of one or more vocal and visible advocates at high administrative levels who are willing to obtain commitment from other key actors for the program. This commitment *must* be obtained from those individuals who will actually implement the program.

Next, to create a realistic structure for carrying out effective prevention activities, various options for proceeding must be examined and accepted by people at all

organizational levels being affected by the innovation. In the Parcel et al. (1988) research, two planning groups were formed. The policy planning group developed clarity about the values, goals, and purposes of the prevention program and addressed the concerns, reservations, and perceived "big picture" problems identified by the group. The group then wrote a policy incorporating a prevention goal and recommended that systemwide resources be set aside to implement the policy.

A second set of groups called *practice planning groups* was then convened to translate the policy into a set of concrete activities. The practice planning groups involved those individuals who would be directly responsible for implementing the program. Together with recognized prevention experts, they determined new practices or modifications of existing practices that were needed to address the prevention goals.

The third phase of organizational change addressed preparing specific individuals to implement and maintain the agreed-upon activities. School staff's roles and procedures were altered. Major steps in implementing these alterations included providing in-service training, providing technical assistance and resources, monitoring program implementation, and providing feedback.

The fourth and final phase was coordinating and launching the student learning activities. Staff were hired to model appropriate behavior, to teach cognitive and behavioral skills that fit students' interests and developmental levels, to help students write contracts to practice new skills in settings outside the classroom, and to deliver systemwide recognition of students' successful performance of desirable new behavior. As summarized earlier, other similar programs have provided a variety of ways to support student learning, including the use of media to model appropriate behavior and the distribution of cues or reminders (bookmarks, posters, ads, displays; Kraft 1984).

The Importance of Clearly Defined Goals

The goal for alcohol and other drug prevention programs may seem self-evident. However, many prevention efforts fail in the planning stage because the avowed goals appear unrealistic, unachievable, or unnecessary. An example, mentioned by Gonzalez in section III, is trying to keep college students from drinking when 90 percent or more of them have already been introduced to alcohol. Prevention can be defined with several very different goals in mind (Gilchrist, in press). The adoption of a goal has important philosophical and political ramifications that can positively or negatively affect acceptance of a program by either implementers or recipients.

Designers of a prevention program must concretely define the program's mission and boundaries, that is, what it is and is not expected to accomplish. Prevention literature reveals a range of intended accomplishments. Past alcohol and other drug prevention programs variously have aimed (1) to prevent all use of one or more substances (the abstinence goal); (2) to reduce the overall levels or amounts of use (the reduction-in-rates-of-use goal); (3) to reduce only dangerous use or progression of use into addiction (the reduction-of-abuse goal); or, finally, (4) to reduce the number

of serious problems that are caused by the level of use (the insulation-from-harm goal).

The goal of many published prevention studies—that of preventing initiation of alcohol and other drug use—may be an appropriate goal for addressing the needs of children, who (usually) enter the program as nonusers. The prevention-of-initiation goal is less useful for groups such as college students, where the majority already have experience with one or more substances. Adoption (whether consciously or unconsciously) of the abstinence (no-use-at-all) goal, particularly for alcohol, may create both organizational and individual resistance because it appears naively unrealistic. When the target group is of legal drinking age, other ways to frame prevention goals may be more useful than prevention of initiation or achievement of abstinence (Gilchrist 1991; Jessor, 1984). One such frame is insulation from immediate and serious harm resulting from alcohol or other drug use. With this goal as a focus, intervention efforts emphasize awareness, skills, and policies related to specific, concrete circumstances when judgment impaired by alcohol or drugs can have undeniable and permanently harmful effects. Examples of such circumstances are (1) driving, (2) engaging in unprotected or unwanted sexual intercourse while high, or (3) drinking in settings where risk of injuries (for example, from falls) or interpersonal assault (fights, sexual abuse) is high.

Prevention efforts framed as protecting students from harm can be presented as having the goal of eliminating accidents and serious injuries. Success for such a program would be demonstrated by reductions in drunk driving citations, in alcohol-related accidents, and in alcohol- or drug-related assaults, but not necessarily in reductions in overall use of alcohol. The insulation-from-harm goal stresses the social responsibility that students—indeed all adults—have, not for abstaining from drinking, but for not causing harm to others. Prevention activities defined in this manner would focus not strictly on health issues, which many students may brush aside, but on strengthening a campuswide sense of community and mission.

Finally, all prevention programs have a political component or a rationale that sustains and supports (or occasionally undermines) them. Preventive interventions, to be successful, demand considerable energy and resources. Such efforts presumably are launched in response to some recognized demand for action. What is critical to the success of the preventive program is that its shape, focus, and rationale

> fit the community, teacher, and school administrator's [and parents'] definitions of appropriate action....The educational program is not only an effort to change adolescent drinking behavior, but is just as importantly a symbolic act which signals concerned interest groups that some action is being taken to deal with the problem....Enthusiasm for prevention programs can be maintained by their publics because they make political and philosophical sense, even though scientific support may be lacking (Weisheit 1984, pp. 75-76).

That scientific evidence may be ignored is regrettable. Nonetheless, the importance of a political and philosophical underpinning for a preventive intervention

should not be underestimated. If prevention program planners and implementers cannot articulate the program's philosophical basis clearly, the program will be poorly accepted and will have limited impact.

Developing a context-sensitive rationale for the prevention activities is critical to program success, and yet this step is commonly ignored. Social marketing theory and methods have proven useful in conceptualizing the rationale and program definition step (Glanz, Lewis & Rimer 1990; Kotler 1982). The investigation of processes for defining goals and rationales is a useful direction for future research on preventing alcohol and other drug problems on college campuses.

Summary

Approaches to preventing alcohol and other drug use have become more sophisticated over the last 30 years. The most recent evolution stresses the importance of addressing both individuals and their environments to achieve lasting behavior change. Because campuses are self-contained environments, campus-based prevention programmers have the opportunity to address and potentially to affect a relatively comprehensive slice of students' lives. Theories of organizational change suggest that a campus alcohol and drug prevention coordinator should begin a prevention planning effort with support across all levels of campus life, from students themselves to the president, provost, or chancellor. This ambitious goal may not be as formidable as it sounds if some creative attention has been given to framing the prevention effort in clear, positive terms that bring different constituencies (e.g., resident hall assistants, students, faculty, staff, administration) together rather than setting one constituency (e.g., administration) against another (e.g., students). It is increasingly clear that "quick fix" approaches to alcohol and other drug prevention do not produce real and lasting effects. Another task for alcohol and drug coordinators is to help constituent groups resist quick fixes and to help them see the range and complexity of intervention activities that are actually required to influence students' behavior. The section by Kraft (1984) listed in the bibliography may be a helpful resource in this beginning phase.

Although a common expectation is that a campus alcohol and drug coordinator should be an expert who will design specialized prevention procedures, theories of organizational change demonstrate that involving a variety of people in designing a variety of preventive activities is more effective. The skills required for a successful campus prevention program may be those of community organizing rather than those related to an expertise in substance use and abuse. A review of past research on alcohol and other drug prevention shows that once a suitably supportive environment for prevention planning and implementation has been established, it is highly desirable to ensure repeated opportunities for students to acquire and practice skills for resisting influences to use alcohol and other drugs. These skills-building opportunities should be as specific and as realistic as possible and should involve a commitment from each student to practice resistance skills outside the training setting and to report successes and failures in future training sessions. An important role for the alcohol and drug coordinator is to enlist planning groups to tailor these skills-building opportunities to

particular groups—for example, fraternity members, first-year students, and all-male dormitory residents—those groups identified by Kraft (1984) as using greater amounts of alcohol and other drugs and requiring more concentrated preventive attention than other groups.

Checklist on Prevention

- ☐ How is alcohol consumption viewed on your campus? As a required aspect of social behavior? A rite of passage? A drug? A health risk or a necessary part of the social scene?
- ☐ Is your institution relying on a canned prevention curriculum rather than one that is tailored to your environment?
- ☐ Do you have clarity on your prevention program's mission and goals?
- ☐ Is there support for programmatic efforts (fiscal and otherwise) from top level administration?
- ☐ Is there inclusion of all concerned constituencies in planning and implementing your prevention strategy?
- ☐ Are policy and planning groups in place to develop the goals and purposes of prevention programs?
- ☐ Are practice planning groups in place to translate policy into a set of concrete activities?
- ☐ Are individuals identified who can implement and maintain agreed upon activities?
- ☐ Do you have a "context sensitive" rationale for your prevention activities?
- ☐ Does your prevention plan have support from across all levels of campus life, from students to the president?

References

Argyris, C. (1987). Reasoning, action strategies, and defensive routines. In R. W. Woodman & W.A. Pasmore (Eds.), Research in organizational change and development: Vol. 1. Greenwich, CT: JAI Press.

Arkin, R.M., Roemhild, H.F., Johnson, C.A., Luepker, R.V., & Murray, D.M. (1981). The Minnesota smoking prevention program: A seventh-grade health curriculum supplement. Journal of School Health, 51, 611-616.

Bachman, J.G., Johnston, L.D., O'Malley, P.M., & Humphreys, R.N. (1988, March). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. Journal of Health and Social Behavior, 29, 92-112.

Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (in press). How changes in drug use are linked to perceived risks and disapproval: Evidence from national studies that youth and young adults respond to information about the consequences of drug use. In L. Donohew & H. Sypher (Eds.), Persuasive communication and drug abuse prevention. Hillsdale, NJ: Lawrence Erlbaum.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

_____ (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

_____ (1989, September). Human agency in social cognitive theory. American Psychologist, 1175-1184.

Battjes, R.J. (1985). Prevention of adolescent drug abuse. The International Journal of the Addictions, 20(6 & 7), 1113-1134.

Bell, C.S., & Battjes, R. (1985). Prevention research: Deterring drug abuse among children and adolescents (NIDA Research Monograph 63). Rockville, MD: National Institute on Drug Abuse.

Botvin, G.J., Baker, E., & Renick, N.L., Filazzola, A.D., & Botvin, E.M. (1984). A cognitive-behavioral approach to substance abuse prevention. Addictive Behavior, 9, 137-147.

Bracht, N. (1990). Health promotion at the community level. Sage Publications.

Charter, W.W., et al. (1973). The process of planned change at the school's instructional organization. Eugene, OR: University of Oregon, Center for the Advanced Study of Educational Administration.

Duryea, E. (1983). Utilizing tenets of inoculation theory to develop and evaluate a preventive alcohol education intervention. Journal of School Health, 48, 667-671.

_____ (1984). An application of inoculation theory to preventive alcohol education. Health Education, 15, 4-7.

Duryea, E.J., Ransom, M.W., & English, G. (1990, Summer). Psychological immunization: Theory, research, and current health behavior applications. Health Education Quarterly, 17(2), 169-178.

Evans, R.I., Rozelle, R.M., Mittlemark, M.B., Hansen, W.B., Bane, A.L., & Harvis, J. (1978). Deterring the onset of smoking in children: Knowledge of immediate physiological effects and coping with peer pressure, media pressure, and parent modeling. Journal of Applied Social Psychology, 8, 126-135.

Flay, B.R. (1985). Psychosocial approaches to smoking prevention: A review of findings. Health Psychology, 4, 449-488.

Flay, B.R., d'Avernas, J.R., Best, J.A., Kersell, M.W., & Ryan, K.B. (1983). Cigarette smoking: Why young people do it and ways of preventing it. In P.J. McGrath & P. Firestone (Eds.), Pediatric and adolescent behavioral medicine: Issues in treatment: Vol. 10: Spring series on behavior therapy & behavioral medicine (pp. 132-183). New York: Springer.

Gilchrist, L.D. (1991). Defining the intervention and the target population in Leukefeld, C.G & Bukowski, W.J. (Eds.). Drug abuse prevention intervention research: Methodological Issues (NIDA Research Monograph 107). Rockville, MD: National Institute on Drug Abuse.

Glanz, K., Lewis, F.M., & Rimer, B.K. (Eds.). (1990). Health behavior and health education: Theory, research, and practice. San Francisco: Jossey-Bass.

Glynn, T.J., Boyd, G.M., Gruman, J.C. (1990, Fall). Essential elements of self-help/minimal intervention strategies for smoking cessation. Health Education Quarterly, 17(3), 329-345.

Glynn, T.J., Leukefeld, C.G., & Ludford, J.P. (Eds.). (1983). Preventing adolescent drug abuse: Intervention strategies (NIDA Research Monograph 47). Rockville, MD: National Institute on Drug Abuse.

Gonzalez, G.M. (1989, November). An integrated theoretical model for alcohol and other drug abuse prevention on the college campus. Journal of College Student Development, 30, 492-503.

_____ (1990, March/April). Effects of a theory-based, peer-focused drug education course. Journal of Counseling & Development, 68, 446-449.

Gonzalez, G.M., & Haney, M.L. (1990, July). Perceptions of risk as predictors of alcohol, marijuana, and cocaine use among college students. Journal of College Student Development, 31, 313-318.

Goodman, R.M., & Steckler, A.B. (1990). Mobilizing organizations for health enhancement: Theories of organizational change. In K. Glanz, F.M. Lewis, & B.K. Rimer (Eds.), Health behavior and health education: Theory, research, and practice. San Francisco: Jossey-Bass.

Goodstadt, M.S. (1986). School-based drug education in North America: What is wrong? What can be done? Journal of School Health, 56(7), 278-281.

Green, L. (1986). The theory of participation: A qualitative analysis of its expression in national and international health politics. Advances in Health Education and Promotion, 1, 211-236.

Green, L.W., & McAlister, A.L. (1984, Fall). Macro-intervention to support health behavior: Some theoretical perspectives and practical reflections. Health Education Quarterly, 11(3), 322-339.

Iverson, D.C., & Kolbe, L.J. (1983). Evolution of the national disease prevention and health promotion strategy: Establishing a role for the schools. Journal of School Health, 53, 294-302.

Jessor, R. (1984). Adolescent development and behavioral health. In J.D. Matarazzo, S.M. Weiss, J.A. Herd, N.E. Miller, & S.M. Weiss (Eds.), Behavioral health: A handbook of health enhancement and disease prevention (pp. 69-90). New York: Wiley.

Johnson, C.A., Pentz, M.A., Weber, M.D., Dwyer, J.H., MacKinnon, D.P., Flay, B. R., Baer, N.A., & Hansen, W.B. (in press). The relative effectiveness of comprehensive community programming for drug abuse prevention with risk and low risk adolescents. Journal of Consulting and Clinical Psychology.

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1989). Drug use, drinking and smoking. In National Survey Results from High School, College and Young Adult Populations, 1975-1980 (DHHS Pub. No. ADM 89-1638). Rockville, MD: National Institute on Drug Abuse.

Jones, R.M. (1990, April). Merging basic with practical research to enhance the adolescent experience. Journal of Adolescent Research, 5(2), 254-262.

Kazdin, A.E. (1975). Behavior modification in applied settings. Homewood, IL: Dorsey Press.

Kettner, P., Daley, J., & Nichols, A. (1985). Initiating change in organizations and communities. Monterey, CA: Brooks/Cole.

Kolbe, L. (1986). Increasing the impact of school health promotion programs: Emerging research perspectives. Health Education, 17(5), 47-52.

Kotler, P. (1982). Marketing for nonprofit organizations (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Kraft, D.P. (1984). A comprehensive prevention program for college students. In P.M. Miller & T.D. Nirenberg (Eds.), Prevention of alcohol abuse (pp. 327-369). New York: Plenum.

Lefebvre, R.C., & Flora, J.A. (1988, Fall). Social marketing and public health intervention. Health Education Quarterly, 15(3), 299-315.

Lorig, K., & Laurin, J. (1985, Fall). Some notions about assumptions underlying health education. Health Education Quarterly, 12(3), 231-243.

Mauss, A.L., Hopkins, R.H., Weisheit, R.A., & Kearney, K.A. (1988). The problematic prospects for prevention in the classroom: Should alcohol education programs be expected to reduce drinking by youth? Journal of Studies on Alcohol, 49(1), 51-61.

McAlister, A., Perry, C., Killen, J., Slinkard, L.A., & Maccoby, N. (1980). Pilot study of smoking, alcohol and drug abuse prevention. American Journal of Public Health, 70, 719-721.

McAlister, A.L., Perry, C., & Maccoby, N. (1979). Adolescent smoking: Onset and prevention. Pediatrics, 63, 650-658.

McGuire, W. (1961). Resistance to persuasion conferred by active and passive prior refutation of the same and alternative counter-arguments. Journal of Abnormal and Social Psychology, 63, 326-332.

McLeroy, K.R., Bibeau, D., Steckler, A., & Glanz, K. (1988, Winter). An ecological perspective on health promotion programs. Health Education Quarterly, 15(4), 351-377.

Moskowitz, J.M. (1989). The primary prevention of alcohol problems: A critical review of the research literature. Journal of Studies on Alcohol, 50(1), 54-88.

Parcel, G.S., et al. (1987). School promotion of health diet and exercise behavior: An integration of organizational change and Social Learning Theory interventions. Journal of School Health, 57(4), 150-156.

Parcel, G.S., Simons-Morton, B.G., & Kolbe, L.J. (1988, Winter). Health promotion: Integrating organizational change and student learning strategies. Health Education Quarterly, 15(4), 435-450.

Pentz, M.A., Dwyer, J.H., MacKinnon, D.P., Flay, B.R., Hansen, W.B., Wang, E.Y., & Johnson, C.A. (1989). A multi-community trial for primary prevention of adolescent drug abuse. Journal of the American Medical Association, 261, 3259-3266.

Polich, J.M., Ellickson, P.L., Reuter, P., & Kahan, J.P. (1984, February). Strategies for controlling adolescent drug use (Rand Publication Series, R-3076-CHF). Santa Monica, CA: Rand Corporation.

Porras, J., & Hoffer, S. (1986). Common behavior changes in successful organization development efforts. Journal of Applied Behavioral Science, 22, 477-494.

Resnick, H. (1983). Saying no programs (Contract No. 271-81-4907). National Institute on Drug Abuse, Division of Prevention and Communications, Prevention Branch.

Rogers, E.M. (1983). Diffusion of innovations (3rd ed.). New York: Free Press.

Rothman, J. (1970). Three models of community organization practice. In F. Cox et al. (Eds.), Strategies of community organization (20-36). Itasca, IL: F.E. Peacock Publishers.

Rundall, T.G., & Bruvold, W.H. (1988, Fall). A meta-analysis of school-based smoking and alcohol use prevention programs. Health Education Quarterly, 15(3), 317-334.

Schaps, E., DiBartolo, R., Moskowitz, J., Palley, C.S., & Churgin, S. (1981). A review of 127 drug abuse prevention evaluations. Journal of Drug Issues, 11, 17-43.

Schinke, S.P., & Gilchrist, L.D. (1983). Primary prevention of tobacco smoking. Journal of School Health, 53, 416-419.

Simons-Morton, B.G., et al. (in press). Implementing organizational changes to promote healthful diet and physical activity at school. Health Education Quarterly.

Tobler, N.S. (1986). Meta-analysis of 143 adolescent drug prevention programs: Quantitative outcome results of program participants compared to a control or comparison group. Journal of Drug Issues, 16, 535-567.

Walter, H.J., Hofman, A., Connelly, P.A., et al. (1985). Primary prevention of chronic disease in childhood: Changes in risk factors after one year of intervention. American Journal of Epidemiology, 122, 772-781.

Weisheit, R.A. (1984). The social context of alcohol and drug education: Implications for program evaluations. Journal of Drug Issues, 14(3), 469-477.

Wiker, A.W. (1969). Attitudes vs. actions: The relationship of verbal and overt behavioral responses to attitude objects. Journal of Social Issues, 25, 42-78.

V

The Influence of College Environments on Student Drinking[3,4,5]

"The arrangement of environments is probably the most powerful technique we have for influencing behavior."

(Moos 1974, p. 4).

Introduction

The use of alcohol on campuses has from times past presented problems to college and university administrators (Straus & Bacon 1953). However, problems associated with both alcohol and other drug use have escalated in recent years. Substance abuse (primarily alcohol) is the single greatest threat to the quality of campus life (Carnegie Foundation for the Advancement of Teaching 1990). For example, over a recent period at one research university in the Northeast, alcohol use was related to 75 percent of campus police arrests, 80 percent of residence hall damages, 85 percent of sexual assaults, 70 percent of discipline referrals, and 50 percent of suicide attempts (L. Upcraft, personal communication, September 11, 1990). This increase in problems is one reason federal legislation has addressed the use of controlled substances by college students and faculty. The Drug-Free Schools and

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[4] This chapter is an abbreviated version of a literature review of environmental influences on college student alcohol use (Kuh, 1991) requested by the Office of Educational Research and Improvement, U.S. Department of Education. The views expressed here, however, are those of the author and do not represent the opinions or positions of the U.S. Department of Education.

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Communities Act Amendments of 1989 (Public Law 101-226) and implementing regulations published in 1990 require that an institution's leaders notify students and employees that it has adopted and implemented a program "to prevent the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on institutional property or at any of its activities."

The response of college or university officials to alcohol and other drug-related problems sends strong messages about that institution's values. To reduce alcohol use by students, a long-term, comprehensive strategy is required. Such a strategy must take into account three elements:

1. The host—the student's particular susceptibility to alcohol (e.g., alcohol affects women more rapidly than men) and his or her knowledge about alcohol.

2. The agent—alcohol's chemical properties and effects.

3. The environment—the settings in which drinking occurs, the availability of alcohol, peer influence and campus mores that shape drinking norms, and the legal sanctions and policy regulations that govern alcohol use on and off campus (Gonzalez 1987).

Far more is known about the host and about the agent than is known about the characteristics of campus environments that promote or discourage the use of controlled substances. Indeed, "[T]here is still a great deal to be learned about university campus culture as it interacts with demographic and personality variables to influence the use and abuse of alcohol" (Brennan et al. 1986b, p. 490).

Purposes of This Article

This article has two purposes: (1) to summarize what is known about the influence of collegiate environments on college students' use of alcohol and (2) to suggest how environmental conditions can be created to foster positive, health-enhancing behaviors in those students. The phrase *health-enhancing environments* connotes a campus setting in which the institution's philosophy, physical spaces, policies, practices, and personnel foster responsible behavior regarding alcohol and other drug use.

First, several conceptions of college environments are discussed. Because behavior is a function of the interaction between the environment and the person (Lewin 1936), the characteristics of college students who use alcohol are summarized. Second, the literature on environmental influences (on the use of alcohol by college students) is examined. Finally, conclusions and recommendations are presented for institutional policies and practices, and areas that require additional research are suggested.

Caveats

Most of the research cited in this paper was conducted at residential campuses that attract predominantly traditional-age (18-23) students. Hence, caution must be exercised when applying this information to "nontraditional" students or to urban or community college settings where most of the students are older, live off campus, and attend school part time. The primary environments that influence the behavior of older, commuting, and part-time students are more likely to be the home, family, workplace, and church, not the campus.

The College Environment and Characteristics of College Student Drinkers

People both shape their environment and are shaped by it (Banning 1975; Barker 1963; Kaiser 1972). Although the relationship between environment and behavior is complex, a consistency in behavioral patterns can be disclosed (Bandura 1977; Barker 1968; Moos 1976). That is, the same individuals behave predictably in certain situations because environmental stimuli consistently elicit and reinforce certain behaviors. For example, the actions of people from Western cultures are very predictable when they are in churches, playgrounds, gymnasiums, and museums (Rapaport 1982). Although one could argue that the behavior of college students is also predictable, collegiate environments are not a single culture; many subenvironments exist on a campus and must be identified and studied independently, as well as in relationship to each other.

Collegiate environments have been described in various ways (Walsh 1978). A campus has the following features: physical properties such as the size and location of the campus and its facilities (Gerber 1989); the ambience created by the behavior and personalities of students (Astin & Holland 1961); the perceptions of students (Pace 1969); the environmental "press" (Stern 1970), or norms and expectations established by dominant student groups (Clark & Trow 1966); and the norms, values, and assumptions that guide the behavior of individuals and groups (Kuh & Whitt 1988).

In this paper, the *campus environment* includes all the conditions and influences—such as physical, chemical, biological, social, and cultural stimuli—that affect the growth and development of students (Western Interstate Commission for Higher Education 1973). For example, at a fraternity party, the environment would include the characteristics of the physical setting (e.g., size of party room, music); the number of people present and their expectations; attitudes toward personal responsibility; local and state laws and campus policies; and the availability and type of beverages and food. Hence, student behavior, including alcohol use and other drug use, is a function of the mutually shaping interactions between individuals and the various subenvironments of a college (Huebner 1979). Because information about both people and environments is necessary to understand behavior, the characteristics of college students who use alcohol are summarized.

Characteristics of College Student Drinkers

"Drinking occurs in many forms, meets a variety of individual and group needs, and is accompanied by a variety of attitudes" (Straus & Bacon 1953, p. 199). Many college students do not abuse alcohol, and a small but important minority abstain from alcohol use. In addition, excessive drinking in college does not always lead to problem drinking in the future (Brennan, Walfish & AuBuchon 1986a).

The heaviest, most frequent, and most problematic drinking in college occurs among males (Berkowitz & Perkins 1986a), whites, Catholics, and Protestants (Perkins 1985, 1987); however, direct involvement in religious activities seems to be associated with lower use of alcohol and other drugs (Perkins 1987; Svendsen January 16, 1991). Heavy drinkers also tend to have parents and friends who drink heavily (Brennan, Walfish & AuBuchon 1986b); tend to frequent parties and bars (Kraft 1979a, 1988); and are typically involved with a traditional social group, such as a fraternity, which engages in frequent social activities. Heavy drinkers also are more likely to drop out and tend to perform less well academically. Although the relationship between socioeconomic status and drinking is unclear, students from affluent backgrounds seem to drink more, and drink more frequently, although they do not necessarily have more problems associated with drinking (Brennan et al. 1986b).

The presence of friends who drink heavily seems to influence men more than it does women (Brennan et al. 1986a). Women are more likely to limit the negative consequences of drinking in public (e.g., fighting; Moos, Moos & Kulik 1977). Because the female heavy drinker may be more likely to drink for escapist[6] or rebellious reasons, she is different from the male heavy drinker (Moos 1979). It also is possible that because of gender-related norms, women confine abusive drinking to private settings or underreport negative consequences—possibilities that have not been adequately investigated (Berkowitz & Perkins 1987b).

In summary, of the two major influences on the hazardous use of alcohol by college students, family and peers, peer influence is stronger (Brennan et al. 1986b).

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[6] Sanford (1967) categorized three types of drinking practices. *Escapist drinking* is an irresponsible way to avoid anxiety, unpleasantness, and frustration; to relieve boredom; and to rebel from authority. Escapist drinking also may be triggered by impulse expression needs common to the adolescent and young adult years and may lead to hazardous use of alcohol. *Facilitative drinking* fosters conviviality, communication, and social interaction. Examples of facilitative drinking are the cocktail party and having a drink with dinner or at an office party. Whether alcohol actually fosters social interaction is not known for certain. Many students simply drink to conform to peer expectations; at worst, drinking under these circumstances may lead to escapist drinking. *Integrative drinking* adds meaning and dignity to a culture without being essential to its existence. At ceremonial occasions, alcohol may symbolize an inclusive sense of community and enhance group solidarity; however, alcohol is not a substitute for community, that is, for shared experiences. Abstinence may be integrative when the practice is grounded in a coherent system of beliefs and actions. However, abstinence can also be a form of escapism when a group is so threatened by contrary beliefs that it expresses hostility toward groups whose attitudes and practices differ (Sanford, 1967).

Indeed, Oetting and Beauvais (1986) reported that 95 percent of the variance in drug use can be accounted for by the influence of peers.

Literature Review of Environmental Influences on College Student Use of Alcohol

To synthesize the literature on the environmental influences on college students' alcohol use, a conceptual framework was developed that has four domains:

1. Physical properties of the campus—the institution's size, location, facilities, open spaces, and other permanent attributes.

2. Organizational properties of the campus—administrative structures and processes; residential groupings, policies, and practices (that guide student behavior and regulate functions at which alcohol may be present); and activities designed to shape student attitudes, knowledge, and behavior related to health enhancement and personal responsibility.

3. Social-psychological properties of the campus—aggregated characteristics; attitudes and perceptions (e.g., peer pressure, stress produced by a competitive academic climate [Baird 1988]) of students, faculty, staff, and others (e.g., graduates).

4. Cultural properties of the campus—assumptions, values, and artifacts (e.g., traditions, rituals, language) that shape behavior and create a campus climate wherein meaning and values are attached to events, activities, and behavior of members of the institution (Kuh & Whitt 1988).

These domains are not mutually exclusive; variables from one domain may be manifested in other domains. For example, certain cultural properties, such as traditions, may interact with social-psychological properties, such as peer pressure. In addition, the external environment, although it is not a category in the conceptual framework, influences student attitudes and behavior. Changes in state law and ordinances (Gonzalez 1990) and customs of ethnic groups living near the college also shape student attitudes and behavior (Kuh & Whitt 1988).

Physical Properties of Environments

Design of Buildings

The amount and arrangement of space seems to have the most predictable influence on behavior (Griffin 1990). The design and location of buildings either facilitates or inhibits social interaction and the development of a cohesive interpersonal climate (Myrick & Marx 1968). In general, the level of stress will be lower in physical

environments which are neater and more organized (Mehrabian & Russell 1974; Ahrentzen, Jue, Skorpanish & Evans 1982). In densely populated areas, such as high-rise residence halls, indicators of social pathology tend to be higher, a factor often associated with the hazardous use of alcohol (Moos 1976, 1979).

Design of Interior Settings

Visual stimuli, such as the low lights of a cocktail lounge and personalized mugs and whiskey bottles, promote consumption (Miller, Hersen, Eisler, Epstein & Wooten 1974; Strickler, Dobbs & Maxwell 1979). Colors are associated with certain psychological effects, such as depression (Rapoport 1982; Schuh 1980). This information suggests that pathological behavior is less likely to be manifested in the more comfortable physical settings (residence halls and other places frequented by students). It is not known whether crowding or the color of a room is related to the hazardous use of alcohol.

Size of Interior Settings

People feel more secure, interested, and satisfied in environments that emphasize involvement, affiliation, and support (Moos 1979; Wicker 1979). The greater the number of students on a campus, in a residence hall, or in a classroom, the more disconnected they tend to be from each other and from faculty and staff. A proliferation of courses has fragmented the curriculum, which further isolates departmental staff from each other and from students (Clark 1989). Large classes make it difficult for students to get to know the instructors (and vice versa). Moreover, when a campus has thousands of students, it is difficult for leaders to express a coherent philosophy regarding alcohol and other drug use (Kuh et al. 1991).

Influence of Off-Campus Environments

Institutions may be able to create a physical environment that promotes satisfaction and feelings of well-being which are—as will be demonstrated later—precursors to responsible, health-enhancing behaviors. However, many off-campus influences can counteract the successes of an institution. For example, "[O]ne block away off campus there are . . . bars with three-for-one drinks every day and quarter beer nights" (Connell 1985, p. 47). Residential colleges and universities located in somewhat isolated settings that have large numbers of traditional-age students face especially difficult problems. Few activities may be available in the surrounding community to offset the use of alcohol by students (Kraft 1979a). At institutions with a substantial number of commuting students, students spend far more time off, than on, campus. At these institutions, issues related to alcohol use become as much a responsibility of the surrounding community as they are of the institution.

Organizational Properties

Campus Policies and Practices

The percentage of colleges and universities permitting alcohol consumption on campus did not change between 1979 (77 percent) and 1991 (75 percent) (Anderson & Gadaleto 1991). Other policies, however, have changed. For example, more institutions require (1) prior registration of events involving alcohol and (2) the serving of nonalcoholic beverages and food at events where alcohol is present. More stringent policies are in place regarding the consumption of beer in public places. In addition, the percentage of campuses with alcohol education and prevention programs has increased (Fischer 1987), stimulated in part by funding from governmental agencies such as the Fund for the Improvement of Postsecondary Education, U.S. Department Education.

Governmental Policies

According to Gonzalez (1990), despite changes in campus policies and the change in the legal drinking age from 18 or 19 to 21, alcohol consumption and alcohol-related problems did not significantly decrease for either underage or legal-age students. In another study, an increase in purchase age was associated with a decrease in campus incidents of disruption and disorderly behavior, criminal mischief, vandalism, and noise problems (Hayes-Sugarman 1989). However, these same negative behaviors *increased* in the surrounding community, suggesting that a higher drinking age and stricter enforcement do not necessarily discourage students from drinking. Rather, it seems to force them off campus to drink.

Residential Groupings

In residence halls, drinking usually occurs in private rooms by small groups of friends or roommates, seldom by students who are alone (Kraft 1979a). In general, fraternity and sorority members drink more frequently, consume more alcohol per occasion, and have poorer grades due to alcohol consumption than students who do not belong to fraternities or sororities (Brennan, Walfish and AuBuchon 1986b; Globetti, Stem, Marasco & Haworth-Hoeppner 1988). It should be noted that not all fraternity and sorority members are heavy users of alcohol (Goodwin 1989).

As with fraternities and sororities, students in single-sex living units where almost everyone drinks heavily tend to drink heavily themselves. A heterogeneous living unit (i.e., one in which abstainers, moderate drinkers, and heavy drinkers live together) has more diverse, mediating influences and provides students with a wider choice of friends; hence, "[S]tudents are more likely to find other students with similar attitudes and values and less likely to experience consistent pressure to change" (Moos 1979, p. 252).

Students in coeducational housing units tend to be more independent, nonconforming, and have wider interests than those in single-sex living units (Moos 1979). When men and women are housed together, more moderate drinking norms often emerge, perhaps because there is less emphasis on dating and partying—which results in fewer opportunities and less social pressure to drink.

Residence Hall Staff

Berkowitz and Perkins (1986b) found that alcohol consumption by residence hall assistants (RAs) was similar to that of the "typical" student. However, RAs were less likely to drink too much or to abstain. Also, they often underestimated the degree to which other students drink (e.g., perceived consumption to be more moderate than it actually was); hence, RAs may perpetuate misperceptions regarding alcohol use.

Involvement in Campus Life

Some research suggests that when students are involved in campus activities they drink less (Goodwin 1989; Sherry & Stolberg 1987). Astin (1977), however, found that drinking is common among students involved in such activities as student government and athletics. Brennan et al. (1986b) found that although participation in a greater number of extracurricular activities was not related to quantity or frequency of alcohol consumption, frequency of intoxication was positively related. A key factor is the nature of the activity in which a student becomes involved; that is, if the activity is compatible with the institution's educational mission and purposes (Kuh et al. 1991), alcohol use may be less likely to reach hazardous levels, a point which will be discussed in the next section.

Social-Psychological Properties

Social Context of Drinking

Women tend to drink at coeducational social occasions. Men use alcohol in a wider range of settings and activities—outdoors and at athletic events—as well as alone, in small groups of other men, and in mixed groups (Engs & Hanson 1987).

People in settings where alcohol is present, such as a drinking establishment or fraternity party, feel an obligation to drink. The amount of time spent in such settings and the number of people in a group who are drinking together are positively related to the amount consumed (Cutler & Storm 1975; Room 1972). Fast drinkers in the group often force slow drinkers to consume more by using toasting rituals, drinking games, and ordering drinks in complete rounds; these are behaviors that challenge slow drinkers to finish their drinks so that another round can be ordered (Skog 1979).

Whether or not an individual student can resist the urge to drink too much in settings where alcohol is present depends on the role demands and stresses in the immediate situation and on the support available from other people or reference groups. For example, acceptance by peers is very important for first- and second-year traditional-age students (Chickering 1969). Many students lack the self-confidence and maturity to make appropriate decisions when conflicts arise, such as requesting a nonalcoholic beverage at a party. Hence, using alcohol in public settings is often an expression of a need for approval and acceptance (Kraft 1979a; Oetting & Beauvais 1986). This is particularly problematic for women because the alcohol tends to be used most frequently at male residences (e.g., residence halls, apartments, fraternity houses), a tendency that subjects women to male-dominated social norms (L. Upcraft, personal communication, September 11, 1990).

Gender Roles

Traditional male and female role expectations lead to drinking patterns that differ between men and women (Wilsnack & Wilsnack 1978). Moos (1979) speculated that men tend to be encouraged to drink and misbehave, but women are discouraged from becoming intoxicated. The net effect of environmental influences may be stronger for women than for men because women are socialized to be less assertive. Women also tend to prefer group harmony and cohesion (Eagly 1978; Gilligan 1982). Hence, women are more likely to accommodate to group norms and are less willing than men to state their personal viewpoints in group situations.

Environmental Press

Astin (1968) empirically estimated the average level of drinking in 245 institutions of higher education. Above-average levels of drinking were more common at colleges and universities that emphasized competition; where students were argumentative, aggressive, and snobbish; and where the atmosphere was liberal and informal. Below-average levels of consumption were more characteristic of colleges described as cohesive and having high levels of involvement in classes, and where the administration adopted strict rules against unlawful drinking. Also, drinking was found to be more common at selective, affluent colleges and lower at institutions where a sense of community was strong and where norms for appropriate behavior were clear (Astin 1968, 1977).

Institutional Bonding

Cherry (1987) proposed that social bonds develop between students and their college that are similar to those of parent-child bonds.[7] Students with strong bonds to their college drank much less than did students with weak or broken bonds. The types of involvement in college activities that facilitated appropriate bonding were not identified by Cherry (1987). Perhaps the more students feel a sense of belonging within the college community (Kuh et al. 1991), the less likely they are to drink heavily.

Cultural Properties

The "culture" of a campus also contributes to drinking patterns, as one researcher has noted: "The clearly emergent view of what is required to make a significant difference in reducing alcohol and other drug use is that the campus culture must be addressed" (Roberts, in press). Culture is the shared language, practices, symbols, and beliefs that influence behavior (Kuh & Whitt 1988; Schein, 1985). To examine the influence of culture on behavior, four layers must be considered: (1) the external environment, (2) the institution, (3) subcultures, and (4) individual actors (Kuh & Whitt 1988). The cultural elements embedded in these layers are complex and mutually shaping; hence, cultural properties in one layer (e.g., the external environment) shape cultural properties of other layers (e.g., institutional traditions or individual behavior; Kuh & Whitt 1988).

The External Environment

One researcher has said, "If we are interested in understanding the institution, we must identify and appreciate how the external environment shapes the institution" (Sanford 1962, p. 73). A society or an organization, as well as an individual, can show signs of addiction. Millions of citizens are addicted to food, caffeine, gambling, sex, work, or relationships (Schaef 1987). The characteristics often associated with addicts (and alcoholics) include denial, control, self-centeredness, and rigidity. Schaef and Fassel (1988) posited that these behaviors also characterize many organizations.

Many colleges and universities reflect characteristics of addictive systems:

- Denial—institutions are reluctant to admit that alcohol on campus is a problem and fail to collect accurate data on student drinking.

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[7] *Social bond theory* is a combination of *control theory* and *problem-behavior-proneness theory* (Jessor & Jessor, 1977). Control theory (Hirschi, 1969) is based on the assumption that the quality of the parent-child bond influences the child's participation in unwanted activities. In problem-behavior-proneness theory, behavior is the outcome of an interaction of the personality and environmental influences.

- Control—institutions develop new policies or rely on state law for regulation.
- Self-centeredness—institutions are defensive about criticism.
- Rigidity—institutions are inflexible and very resistant to change.

Viewed from the addictive-society perspective, the campus culture simply reflects societal values and practices related to the use of addictive substances. It is not surprising that alcohol use and abuse on campus is widespread.

Institutions, Subcultures, and Individual Actors

Every college or university has a culture that differs from that of other institutions. For example, the language specific to groups on one college campus differs from the language of similar groups on other college campuses (Becker, Geer, Hughes & Strauss 1961; Louis 1985). To understand why students and faculty use alcohol, their cultures must be understood (Van Maanen 1987).

Alcohol use by students dates back to the 18th and 19th centuries when students rebelled against the punitive, joyless environment imposed on them (Horowitz 1987). Some of this behavior has become institutionalized (e.g., ritualistic consumption, drinking songs), particularly in certain groups such as fraternities (see Leemon 1972).

The availability of alcohol is a symbol of privilege in many collegiate settings, not only among students but also among faculty and alumni (Straus & Bacon 1953). At some institutions, alcohol is available at parties, commencement ceremonies, and other official institutional functions.

Alcohol use on college campuses can also be related to the ethnic or religious history of the school. For example, some institutions founded by Catholics (e.g., St. Anselm's College in New Hampshire and St. John's University in Minnesota) have rathskellers on campus where faculty and students routinely meet to build relationships. Certain cultures, such as the Jewish culture, have strong regulations regarding alcohol use (McClellan 1990; Perkins 1985). In spite of their religious affiliations, students sometimes succumb to peer pressure to drink rather than following religious proscriptions against such behavior (Perkins 1985). Certain Mediterranean cultures reflect a nonabusive alcohol use pattern (Fulton & Spooner 1987); Asian-American and Hispanic students tend not to participate in drinking games; and African-American fraternities center social activities around music and dancing. The ways in which ethnic cultures influence the behavior of students must be better understood.

Aspects of the student culture (such as drinking games) foster underage and potentially hazardous drinking. For example, a recent survey at Towson State University found that more than 65 drinking games exist. A typical student has a repertoire of more than 20 games. Those who participate in drinking games consider

themselves to be "normal" drinkers; only about 3 percent thought that participation in drinking games led to alcohol abuse (Douglas 1987).

Summary

The following points can be drawn about the influence of the college environment on students' behavior:

- The college environment has the greatest influence on students who are open to change, concerned about social acceptance, and responsive to peer pressure (Feldman & Newcomb 1969).
- Some students are able to resist peer pressure.
- Some collegiate environments are powerful enough to influence almost everyone (Moos 1979).
- Many people both conform to and resist environmental influences (Moos 1979).
- Less confident and competent individuals (which includes the largest share of traditional-age [17-19], first-year college students [Chickering 1969]) are more vulnerable to environmental influences (Lawton & Nahemow 1973).
- When students are part of a group of other students who drink, they are more likely to drink themselves, provided that the reference group (or living unit) is cohesive and there is a demand for conformity in alcohol consumption.
- Students whose consumption is below the group drinking norm are more likely to increase their drinking.

Conclusions and Recommendations

Based on this review of the literature of environmental influences on college students' alcohol use, six conclusions are warranted. To create health-enhancing campus environments, an institution must address all of the recommendations that follow. Only comprehensive, long-term, campus-specific strategies can have the desired impact. Readers should interpret the conclusions and recommendations in terms of their own institutions.

Conclusion No. 1

Policies and programs designed to reduce alcohol use by college students have generally been ineffective.

Many evaluations of alcohol education efforts and institutional policies are not very sophisticated. Because the student body changes each year, it is difficult to assess desired changes in behavior.

Nevertheless, some alcohol education programs have had salutary effects. Campuswide efforts, such as Alcohol Awareness Week and specific programs targeted to at-risk groups (such as children of alcoholics), are often effective.

Recommendations for Conclusion No. 1

1. Know your students and the environmental conditions of your campus that are associated with alcohol use. The most accurate information about students can be obtained from self-administered surveys. To understand the influence of campus environments on student life, qualitative research methods (interviews, observations [Kuh 1990]) will be necessary.

2. Tailor "best practices" in alcohol policies, programs, and practices to the institution's environment and its students. Health-enhancing programs and policies must be campus-specific (Engs 1977). Factors that should be addressed in a comprehensive campus alcohol policy are discussed elsewhere (Berkowitz & Perkins 1987a; Gonzalez 1989, 1990; Kraft 1979b, 1984, 1988; Smith 1989).

3. Acknowledge the challenges of "inoculating" a transient population such as college students. Gilchrist discussed *social inoculation* efforts in section IV. These include the development of attitudes and the acquisition of skills to resist peer and other environmental influences on alcohol use (Botvin 1983; Hawkins, Lishner, Catalano & Howard 1986). Because college students are a transient population, annual, continuing efforts are needed to inoculate newcomers and to give booster shots to returning students.

4. Target prevention interventions to members of at-risk groups and their environments. Members of some groups are more vulnerable than others to the hazardous use of alcohol and other drugs. Men; traditional-age, first-year students; residents of all-male residence halls; fraternity and sorority house residents; and children of alcoholics are at greatest risk (Strange & Miller 1978).

Conclusion No. 2

A coherent, clearly articulated, and consistently expressed philosophy about alcohol and other drug use can encourage responsible, health-enhancing behavior.

Health-enhancing policies and interventions must be consistent with the mission, values, and educational purposes of the institution. Student behavior can then be assessed and, if necessary, challenged.

Recommendations for Conclusion No. 2

1. Modify the institution's philosophy toward alcohol and other drug use, if necessary. Every institution has a philosophy related to health-enhancing behavior. However, the philosophy may not be in writing. Moreover, some colleges have strict, but not enforced, policies that create confusion about what the institution's philosophy really is.

2. All members of the campus community should be familiar with the institution's philosophy and be committed to it. Make sure that the institution's philosophy is communicated clearly and consistently in institutional publications and meetings.

3. Compare the institution's actual practices against its stated policies. Students learn from what an institution does just as much as from what institutional policies, faculty, and staff say. Are the rules applied consistently and fairly to all persons?

4. Allocate resources to encourage students to behave in health-enhancing ways. What a college or university values is evident in how its resources are allocated. If an institution says it is important for students to acquire responsible, health-enhancing behaviors, sufficient resources must be directed to those ends.

5. Only establish and/or support a campus pub if such a setting is consistent with the institution's history, cultural values, and philosophy. When frequented by both faculty members and students, a pub fosters moderation and provides students with "integrative experiences" (Sanford 1967). Such facilities may even encourage more frequent interactions between faculty and students, a condition associated with achievement, satisfaction, and persistence (Kuh 1981; Tinto 1987). Whether drinking together by faculty and students is appropriate depends on the law, the institution's philosophy (Sanford 1967), and the pub's environment (Fulton & Spooner 1987).

Conclusion No. 3

Institutions that expect student responsibility and health-enhancing behavior encourage these behaviors.

A college or university promotes responsible, health-enhancing behavior by establishing high, but realistic, expectations for students and faculty and tells students, from their first contact with the institution, that they will be responsible for their own affairs.

Recommendations for Conclusion No. 3

1. Create an environment in which students can be responsible, and one that is not hostile to those who value nondrinking. Student groups should be expected to initiate health-enhancing campaigns around specific themes (e.g., smoking, alcohol use) for a designated period, such as a semester. Groups should be acknowledged for their efforts at campuswide celebrations (Burns 1989).

2. Make health-enhancing experiences of students, wherever they occur, a priority on the agenda of institutional leaders. Health-enhancing programs must be endorsed by campus leaders (Kraft 1984). Merely asserting that the quality of campus life is important does not make it so; actions must accompany the words.

3. Make sure that students in difficulty have support systems to which they can turn. Although students must be expected to exercise responsibility, they must not be abandoned when in trouble (Klein 1989; Williams & Knox 1987). "Early warning systems" and "safety nets" made up of faculty, staff, and students that help students with alcohol problems must be expanded (Kuh et al. 1991).

Conclusion No. 4

Small, "human-scale" environments encourage responsible, health-enhancing behavior.

Health-enhancing attitudes and behavior are fostered when faculty, staff, and students have frequent contact with one another. By providing small residences and classes, maintaining effective communication networks, and widely disseminating information, a college or university encourages its members to know each other, a precursor to caring for one another.

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Recommendations for Conclusion No. 4

1. Create human-scale subenvironments by dividing large facilities into smaller units. In less populated settings (Barker 1963), each person has a greater importance, more responsibility, and a greater sense of self-identity—all of which enhance self-esteem and integration into the campus community.

2. Focus on changing any subenvironmental conditions associated with increased hazardous use of alcohol and other drugs. Dark spaces provide the illusion of anonymity, which allows students to avoid taking responsibility for their own behavior. Visual and auditory cues and symbols (e.g., music, drinking games, bottles, beer mugs) suggest that alcohol consumption is appropriate. Events that attract large numbers of students and allow them to be anonymous and irresponsible, such as fraternity house parties, should be discouraged.

3. Housing assignment policies should take into account the differing behaviors of different groups related to alcohol and other drug use. The size of residences should be reduced if possible; more coeducational housing options should be provided; and first-year male students should be placed in smaller housing units with upperclass students who exhibit responsible behavior. Fraternities require special attention (Creeden 1990). Whether these organizations help or hinder responsible, health-enhancing behavior can only be determined on an institution-by-institution basis (Kuh & Lyons 1990).

Conclusion No. 5

Feelings of loyalty and a sense of specialness encourage responsibility and health-enhancing behavior.

If an institution can create and sustain a culture in which alcohol use is not appropriate and where health-enhancing attitudes and behaviors are valued, students will adopt those values for themselves and behave accordingly (Moos 1976). Hence, the most promising avenue to influencing college student drinking is cultural change[8].

[8] To learn more about culture-shaping strategies, consult one or more of the following: Frost, Moore, Louis, Lundberg, and Martin (1985); Kuh (in press); Morgan (1986); Peterson, Cameron, Mets, Jones, and Ettington (1986); and Schein (1985).

Recommendations for Conclusion No. 5

1. Discover the cultural properties that seem to encourage irresponsible behavior and substance abuse and develop a strategy to lessen these influences. Knowledge of what is happening at an institution is necessary both to discover its culture and to create an environment that engenders student responsibility and health-enhancing behavior. Alcohol and drug education staff, counselors, and other professionals cannot, by themselves, change the campus culture. A commitment from everyone—including institutional leaders (e.g., president, student leaders)—is required if the campus culture is to become health enhancing.

2. Discover how students are influenced by peers, student cultures, and other features of campus life (Kuh 1990). Campus leaders should examine whether the ways in which students spend their time are consistent with the institution's philosophy. How do peers and peer cultures affect students' lives and learning? Does academic competition contribute to the hazardous use of alcohol?

3. Support the establishment of one or more student subcultures that value sobriety, care, and concern. Every campus has student heroines and heroes who model health-enhancing behavior. Publicize their contributions. Acknowledging students who model health-enhancing behavior sends a clear message about what the institution considers to be appropriate behavior.

4. Challenge the sense of privilege associated with alcohol use on the campus. Institutional practices should be examined to determine whether they foster distinctions among groups. Differential treatment of students or others (e.g., graduates, faculty) sends mixed messages about the institution's commitment to health and responsibility.

Conclusion No. 6

More information is needed about environmental influences on college student alcohol and other drug use and successful approaches to fostering drug-free environments.

Although much is known about how certain factors (e.g., peer pressure) shape drinking behavior in small and large group settings, relatively little is known about how alcohol use is influenced by advertisements, off-campus environments, and the physical setting and cultural elements of campus life.

Recommendations for Conclusion No. 6

1. More sophisticated evaluations are needed of the impact of educational programs, campus policies, and federal regulations at different types of institutions (see Berkowitz, section VI, for a review of efforts in this area). Because the college student body changes each year, it is difficult to document changes in drinking behavior. Typically, the results of any study show that little impact was made. Additional investigations should be made into human-scale environments and their effects on drinking behavior.

2. A descriptive study should be undertaken of collegiate environments that have a health-enhancing philosophy, practices, and behavior. The Office of Educational Research and Improvement, the Fund for the Improvement of Postsecondary Education, and the National Institute on Drug Abuse are likely governmental sponsors of such research.

Conclusion

Most college students have experimented with alcohol and—in many cases—other drugs prior to coming to the campus. Strict enforcement of regulations in an effort to maintain an alcohol- and drug-free environment may not be effective. Indeed, a recent survey of colleges and university presidents indicated that more stringent regulations are not likely to have the desired effects (Carnegie Foundation for the Advancement of Teaching 1990). When rules and regulations are strictly enforced, students may simply go off campus. A college or university will not be able to eradicate the hazardous use of alcohol and other drugs without complementary policies and practices in the external environment (e.g., legislation regulating advertising).

Nonetheless, to aspire to be a community where it is *not* assumed that everyone drinks *is* consistent with the purposes of an institution of higher education. There are examples of subcommunities organized around sobriety, care, and concern (e.g., SADD), but the cultures of far too many colleges do not value these qualities. These values must be reflected in an institution's philosophy and exhibited by faculty, staff, and student leaders. Such people must work together to create a sense of urgency (Rappaport 1981) on their campuses so that attention *and* resources are continuously focused on promoting responsible, health-enhancing behavior.

Checklist on Influence of the College Environment

- ☐ Is your campus setting a "health-enhancing" environment in which your institution's philosophy, physical spaces policies, practices,and personnel foster responsible behavior regarding alcohol and other drug use?
- ☐ How strong are the social bonds between students and your institution?
- ☐ Does the "culture" of your campus (language, practice, symbols,and beliefs) contribute to drinking patterns?
- ☐ How well do you know your students and the environmental conditions of your campus that are associated with alcohol use?
- ☐ Does your institution have a clearly articulated and consistently expressed philosophy about alcohol and other drug use?
- ☐ Are members of the campus community familiar with and committed to the institution's philosophy?
- ☐ What resources are available to encourage students to behave in health-enhancing ways?
- ☐ Have you created an environment in which students can be responsible and where students in difficulty can turn for support?
- ☐ Have you created "human scale" subenvironments that enhance self-esteem and integration into the campus community?
- ☐ Does your institution support the establishment of student subcultures that value sobriety, care, and concern?

References

Ahrentzen, S., Jue, B. M., Skorpanish, M.A., & Evans, G.W. (1982). School environment and stress. In G.W. Evans (Ed.), Environmental stress (pp. 225-255). Cambridge, MA: Cambridge University Press.

Anderson, D.S. & Gadaleto, A.F. (1991). Unpublished findings, George Mason University, Fairfax, Virginia.

Astin, A.W. (1968). The college environment. Washington, DC: The American Council on Education.

_____ (1977). Four critical years. San Francisco: Jossey-Bass.

Astin, A.W., & Holland, J.L. (1961). The environmental assessment technique: A way to measure college environments. Journal of Educational Psychology, 52, 308-316.

Baird, L.L. (1988). The college environment revisited: A review of research and theory. In J.C. Smart (Ed.), Higher education: Handbook of theory and research (Vol. IV). New York: Agathon.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice Hall.

Banning, J.H. (Ed.). (1975). Campus ecology: A perspective for student affairs. Portland: National Association of Student Personnel Administrators.

Barker, R.G. (1963). On the nature of the environment. Journal of Social Issues, 19(4), 17-38.

_____ (1968). Ecological psychology: Concepts and methods for studying the environment of human behavior. Stanford, CA: Stanford University Press.

Becker, H.S., Geer, B., Hughes, E.C., & Strauss, A.L. (1961). Boys in white. Chicago: University of Chicago Press.

Berkowitz, A.D., & Perkins, H.W. (1986a). Problem drinking among college students: A review of recent research. Journal of American College Health, 35, 21-28.

_____ (1986b). Resident advisors as role models: A comparison of resident advisor and student peer drinking patterns. Journal of College Student Personnel, 27, 146-153.

_____ (1987a). Current issues in effective alcohol education programming. In J. S. Sherwood (Ed.), Alcohol policies and practices on college and university campuses (pp. 69-85). Washington, DC: National Association of Student Personnel Administrators.

_____ (1987b). Recent research on gender differences in collegiate alcohol use. Journal of American College Health, 36, 123-130.

Botvin, G.J. (1983). Prevention of adolescent substance abuse through the development of personal and social competence. In T.J. Glynn, C.G. Leukefeld, & J.P. Ludford (Eds.), Preventing adolescent drug abuse (Research Monograph No. 47, pp. 115-140). Rockville, MD: National Institute on Drug Abuse.

Brennan, A.F., Walfish, S., & AuBuchon, P. (1986a). Alcohol use and abuse in college students. I. A review of the individual and personality correlates. The International Journal of the Addictions, 21, 449-474.

_____ (1986b). Alcohol use and abuse in college students. II. Social/environmental correlates, methodological issues, and implications for intervention. The International Journal of the Addictions, 21, 475-493.

Burns, W.D. (1989). Alcohol and community: Rethinking privilege. Educational Record, 70(3/4), 54-58.

Carnegie Foundation for the Advancement of Teaching. (1990). Campus life: In search of community. Princeton, NJ: Princeton University Press.

Cherry, A.L., Jr. (1987). Social bond theory and alcohol use among college students. Journal of College Student Personnel, 28, 128-135.

Chickering, A.W. (1969). Education and identity. San Francisco: Jossey-Bass.

Clark, B.R. (1989). The academic life: Small worlds, different worlds. Educational Researcher, 18(5), 4-8.

Clark, B.R., & Trow, M. (1966). The organizational context. In T.M. Newcomb & E.K. Wilson (Eds.), College peer groups: Problems and prospects for research (pp. 17-70). Chicago: Aldine.

Connell, J.R. (1985). Drinking on campus—The 21-year-old drinking age: Education or enforcement? Change, 17(1), 44-51.

Creeden, J.E. (1990). Environmental and behavioral factors affecting fraternity drinking. Journal of College Student Development, 31, 465-467.

Cutler, R., & Storm, T. (1975). Observational study of alcohol consumption in natural settings: The Vancouver beer parlor. Journal of Studies on Alcohol, 36, 1173-1183.

Douglas, P. (1987). Bizz-buzz, turtles, quarters, and one horse club: The role of drinking games among high school and college students. Alcohol Health and Research World, 11(4), 54-57, 92.

Eagly, A.H. (1978). Sex differences in influenceability. Psychological Bulletin, 85, 86-116.

Engs, R.C. (1977). Let's look before we leap: The cognitive and behavioral evaluation of a university alcohol education program. Journal of Alcohol and Drug Education, 22, 39-48.

Engs, R.C., & Hanson, D.J. (1987). College students' drinking patterns and problems. In J.S. Sherwood (Ed.), Alcohol policies and practices on college and university campuses (pp. 57-68). Washington, DC: National Association of Student Personnel Administrators.

Feldman, K.A., & Newcomb, T.M. (1969). The impact of college on students. San Francisco: Jossey-Bass.

Fischer, J.M. (1987). A historical perspective: Alcohol abuse and alcoholism in America and our campuses. In J.S. Sherwood (Ed.), Alcohol policies and practices on college and university campuses (pp. 1-17). Washington, DC: National Association of Student Personnel Administrators.

Fulton, D.R., & Spooner, S.E. (1987). Alcohol on campus: Three current issues. NASPA Journal, 25, 130-136.

Gerber, C. (Ed.). (1989). Preserving a quality environment for learning: Second International Symposium. Columbus, OH: Ohio State University.

Gilligan, C. (1982). In a different voice. Cambridge, MA: Harvard University Press.

Globetti, G., Stem, J.T., Marasco, F., & Haworth-Hoeppner, S. (1988). Student residence arrangements and alcohol use and abuse: A research note. Journal of College and University Student Housing, 18(1), 28-33.

Gonzalez, G.M. (1987). Alcohol policy development: A necessary component for a comprehensive alcohol education program on campus. In J. S. Sherwood (Ed.), Alcohol policies and practices on college and university campuses (pp. 89-95). Washington, DC: National Association of Student Personnel Administrators.

_____ (1989). An integrated theoretical model for alcohol and other drug abuse prevention on the college campus. Journal of College Student Development, 30, 492-503.

_____ (1990). Effects of raising the drinking age and related campus initiatives on student alcohol consumption and alcohol-related problems. Journal of College Student Development, 31, 181-183.

Goodwin, L. (1989). Explaining alcohol consumption and related experiences among fraternity and sorority members. Journal of College Student Development, 30, 448-458.

Griffin, T. (1990). The physical environment of the college classroom and its effects on students. Campus Ecologist, 8(1), 1-4.

Hawkins, J.D., Lishner, D.M., Catalano, R.F., & Howard, M.D. (1986). Childhood predictors of adolescent substance abuse: Towards an empirically grounded theory. Journal of Children in Contemporary Society, 18(1/2), 1-65.

Hayes-Sugarman, K.M. (1989). New York State's 21 alcohol purchase age: Unanticipated consequences in the college community. Unpublished doctoral dissertation, State University of New York, Buffalo. Dissertation Abstracts International, 49(9), 2612-A.

Horowitz, H.L. (1987). Campus life: Undergraduate cultures from the end of the eighteenth century to the present. New York: Knopf.

Huebner, L.A. (Ed.). (1979). Redesigning campus environments: New directions for student services (No. 6). San Francisco: Jossey-Bass.

Kaiser, L.R. (1972). Campus ecology: Implications for environmental design. Boulder, CO: Western Interstate Commission for Higher Education.

Klein, H. (1989). Helping the college student problem drinker. Journal of College Student Development, 30, 323-331.

Kraft, D.P. (1979a). Public drinking practices of college youths: Implications for prevention programs. In T.C. Harford & L.S. Gaines (Eds.), Social drinking contexts (Research Monograph No. 7, pp. 54-84). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

_____ (1979b). Strategies for reducing drinking problems among youth: College programs. In H. T. Blane & M. E. Chavez (Eds.), Youth, alcohol and social policy (pp. 311-354). New York: Plenum.

_____ (1984). A comprehensive prevention program for college students. In P. Miller & T. Nirenberg (Eds.), Prevention of alcohol abuse (pp. 327-369). New York: Plenum.

_____ (1988). Prevention and treatment of alcohol problems on a college campus. Journal of Alcohol and Drug Education, 34, 37-51.

Kuh, G.D. (1981). Indices of quality in the undergraduate experience (AAHE-ERIC/Higher Education Research Report No. 4). Washington, DC: American Association for Higher Education.

_____ (1990). Assessing student culture. In W. G. Tierney (Ed.), Assessing academic climates and cultures: New directions for institutional research (pp. 47-60). San Francisco: Jossey-Bass.

_____ (1991). Environmental influences on alcohol use by college students. (Contract #43-3J47-0-00296). Bloomington, IN: Center for Postsecondary Research and Planning.

Kuh, G.D., & Lyons, J.W. (1990). Greek systems at "involving colleges": Lessons from the College Experiences Study. NASPA Journal, 28, 20-29.

Kuh, G.D., Schuh, J.S., Whitt, E.J., Andreas, R.E., Lyons, J.W., Strange, C.C., Krehbiel, L.E., & MacKay, K.A. (1991). Involving colleges: Successful approaches to fostering student learning and personal development outside the classroom. San Francisco: Jossey-Bass.

Kuh, G.D., & Whitt, E.J. (1988). The invisible tapestry: Culture in American colleges and universities (AAHE-ERIC/Higher Education Research Report No. 1). Washington, DC: American Association for Higher Education.

Lawton, P., & Nahemow, L. (1973). Ecology and the aging process. In C. Eisdorfer & P. Lawton (Eds.), The psychology of adult development and aging. Washington, DC: American Psychological Association.

Leemon, T. A. (1972). The rites of passage in a student culture. New York: Teachers College Press.

Lewin, K. (1936). Principles of topological psychology. New York: McGraw-Hill.

Louis, M.R. (1985). An investigator's guide to workplace culture. In P. Frost, L.F. Moore, M.R. Louis, C.C. Lundberg, & J. Martin (Eds.), Organizational culture (pp. 73-93). Beverly Hills, CA: Sage.

McClellan, M.C. (1990). The problem of teenage drinking. Phi Delta Kappan, 71, 810-813.

Mehrabian, A., & Russell, J.A. (1974). An approach to environmental psychology. Cambridge, MA: MIT Press.

Miller, P.M., Hersen, M., Eisler, R.M., Epstein, L.H., & Wooten, L.S. (1974). Relationship of alcohol cues to the drinking behaviors of alcoholics and social drinkers: An analogue study. Psychological Record, 24, 61-66.

Moos, R. (1974). Evaluating treatment environments: A social ecological approach. New York: Wiley.

_____ (1976). The human context: Environmental determinants of behavior. San Francisco: Jossey-Bass.

_____ (1979). Evaluating educational environments. San Francisco: Jossey-Bass.

Moos, R., Moos, B., & Kulik, J. (1977). Behavioral and self-concept antecedents and correlates of college-student drinking patterns. International Journal of Addictions, 12, 603-615.

Myrick, R., & Marx, B.S. (1968). An exploratory study of the relationship between high school building design and student learning. Washington, DC: Office of Education, U.S. Department of Health, Education and Welfare, Bureau of Research.

Oetting, E.R., & Beauvais, F. (1986). Peer cluster theory: Drugs and the adolescent. Journal of Counseling and Development, 65, 17-22.

Pace, C.R. (1969). College and university environment scales: Technical manual (2nd ed.). Princeton, NJ: Educational Testing Service.

Perkins, H.W. (1985). Religious traditions, parents, and peers as determinants of alcohol and drug use among college students. Review of Religious Research, 27(1), 15-31.

_____ (1987). Parental religion and alcohol use problems as intergenerational predictors of problem drinking among college youth. Journal for the Scientific Study of Religion, 26, 340-357.

Rapoport, A. (1982). The meaning of built environments: A non-verbal communication approach. Beverly Hills, CA: Sage.

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. American Journal of Community Psychology, 9, 1-26.

Roberts, D. (in press). Approaches to dealing with alcohol and other drug use. In College and university administrators' guide to prevention of alcohol and other drug use. Rockville, MD: Office for Substance Abuse Prevention.

Room, R. (1972). Notes on taverns and sociability. (Working Paper No. F25). Berkeley, CA: Social Research Group.

Sanford, N. (1962). Higher education as a field of study. In N. Sanford (Ed.), The American College. New York: Wiley.

_____ (1967). Where colleges fail: A study of the student as a person. San Francisco: Jossey-Bass.

Schaef, A.W. (1987). When society becomes an addict. San Francisco: Harper & Row.

Schaef, A.W., & Fassel, D. (1988). The addictive organization. San Francisco: Harper & Row.

Schein, E.H. (1985). Organizational culture and leadership. San Francisco: Jossey-Bass.

Schuh, J.H. (1980). Housing. In W.H. Morrill & J.C. Hurst (Eds.), Dimensions of intervention for student development. New York: Wiley.

Sherry, P., & Stolberg, V. (1987). Factors affecting alcohol use by college students. Journal of College Student Personnel, 28, 350-355.

Skog, V.J. (1979). Drinking behavior in small groups: The relationship between group size and consumption level. In T.C. Harford & L.S. Gaines (Eds.), Social drinking contexts (Research Monograph No. 7, pp. 54-84). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

Smith, M.C. (1989). Students, suds, and summonses: Strategies for coping with campus alcohol abuse. Journal of College Student Development, 30, 118-122.

Stern, G.G. (1970). People in context. New York: Wiley.

Strange, C.C., & Miller, B. (1978). Alcohol abuse prevention: A systematic campus approach. In T. Goodale (Ed.), Alcohol education and alcohol abuse prevention programs at selected American colleges (pp. 35-39). Gainesville, FL: University of Florida.

Straus, R., & Bacon, S.D. (1953). Drinking in college. New Haven, CT: Yale University Press.

Strickler, D.P., Dobbs, S.D., & Maxwell, W.A. (1979). The influence of setting on drinking behaviors: The laboratory vs. the barroom. Addictive Behaviors, 4, 339-344.

Tinto, V. (1987). Leaving college. Chicago: University of Chicago Press.

Van Maanen, J. (1987, May). Managing education better: Some thoughts on the management of student cultures in American colleges and universities. Presented at the meeting of the Association for Institutional Research, Kansas City.

Walsh, W.B. (1978). Person-environment interaction. In J. Banning (Ed.), Campus ecology: A perspective for student affairs (pp. 6-16). Cincinnati, OH: National Association for Student Personnel Administrators.

Western Interstate Commission for Higher Education. (1973). The ecosystem model: Designing campus environments. Boulder, CO: Western Interstate Commission for Higher Education.

Wicker, A.W. (1979). An introduction to ecological psychology. Monterey, CA: Brooks/Cole.

Williams, F.G., & Knox, R. (1987). Alcohol abuse intervention in a university setting. Journal of American College Health, 36, 97-102.

Wilsnack, S.C., & Wilsnack, R.W. (1978). Sex roles and adolescent drinking. In H. T. Blane and M.E. Chafez (Eds.), Youth, alcohol and social policy. New York: Plenum.

VI

Assessing Collegiate Substance Abuse: Current Trends, Research Needs, and Program Applications[9]

Introduction

Surveys of student alcohol and other drug use allow researchers to assess usage patterns over time and thus serve an important role within college drug prevention programs. The number of institutions conducting such surveys has increased recently. Nevertheless, major problems exist regarding survey conceptualization, development, implementation, and data interpretation. Most reviews of the literature examining collegiate substance use have called attention to these problems, which include difficulties in defining abuse, lack of standardized instruments, and problems related to sample selection and data collection (Anker, Milman, Kahan & Valenti 1971; Berkowitz & Perkins 1986; Brennan, Walfish & AuBuchon 1986; Saltz & Elandt 1986).

This section reviews surveys that assess alcohol and other drug use for counseling, educational, and evaluational purposes and recommends that they be based on relevant theoretical frameworks. Recent attempts to standardize survey instruments and procedures to administer them are presented. Such instruments include the Core Alcohol and Drug Survey developed and used by Drug Prevention Programs in Higher Education's Grantees and the Centers for Disease Control's (CDC) Youth Risk Behavior Survey. A review is given of the literature on alcohol and other drug use among college populations. In addition, an appendix is included that contains sample questionnaire items that are based on theory. These provide information that can be used in prevention programs. Although the section emphasizes alcohol use (as does the literature), relevant studies are presented regarding other drug use. The administration of survey questionnaires and the analysis of survey data are not discussed.

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Overview of Existing Research

Although much is known about college students' alcohol and other drug abuse patterns, a brief overview of the available literature suggests that there are several gaps where new information is needed. In addition, substantial variation exists in sampling procedures, instrumentation, problem definition, methodology, and data analysis. These issues are discussed to establish the need for more comprehensive, standardized instrumentation that could be used to develop a national data base assessing collegiate use and abuse patterns.

Alcohol

Student use and abuse of alcohol has been studied extensively, and a number of important literature reviews summarize what is known about this topic (Berkowitz & Perkins 1986; Berkowitz & Perkins 1987a; Brennan et al. 1986; Saltz & Elandt 1986). Alcohol is clearly the drug of choice on college campuses. Over 90 percent of college students report regular consumption, averaging two to four drinks per occasion a few times weekly, and most studies suggest that approximately 20-25 percent of students have drinking problems (Berkowitz & Perkins 1986). Use patterns and problem incidence vary considerably with respect to gender, family history of alcoholism and other patterns, religious orientation, and racial and ethnic background.

The literature reflects a variety of sampling approaches for assessing alcohol use and abuse, including single or multiple campus studies at one point in time; multiple studies of a single campus over time (Meilman, Stone, Gaylor & Turco 1990; Perkins 1992; Temple 1986); or national studies using large, representative samples at multiple points in time (Engs 1977; Engs & Hanson, 1985; Johnston, O'Malley & Bachman 1989; Presley & Meilman 1991). Wechsler and McFadden's study (1979) of students at 34 New England colleges provides one of the most comprehensive discussions of alcohol use problems and patterns at one point in time, and the Institute for Social Science Research's Monitoring the Future project provides excellent data tracking a representative national sample over an extended time period (Johnston et al. 1989). Although most studies cited here use random selection techniques to ensure a representative sample of students, the literature is replete with surveys using extremely unrepresentative convenience samples (such as students in introductory courses or alcohol education workshops), from which it is almost impossible to generalize. Another approach has been to conduct repeated surveys of college administrators assessing their perceptions of student use patterns and problems as well as surveys of available campus resources (Anderson & Gadaleto 1984; Gadaleto & Anderson 1986).

In addition to this variability in sampling approaches, substantial differences exist across studies in instrumentation, problem definition, methodology, and data analysis that prevent detailed comparisons from being made across studies. As a result, many researchers have called for the development of standardized instrumentation that can be used with all sampling approaches. Standardized instrumentation would also allow data from different studies to be aggregated and for meta-analyses to be conducted.

Other Drug Use

Although illicit drug use has been studied extensively among pre-college adolescents and among college students in the early 1960s and early 1970s, few recent studies exist on college populations. (In contrast, hundreds of studies have been published on alcohol use and abuse.) Available research has focused on overall prevalence rates without attempting to define abuse or examine motivations, negative consequences, and other correlates. These studies suggest that illicit drug use increased dramatically from the mid-1960s through the mid-1970s, eventually decreasing in the 1980s (Meilman, Gaylor, Turco & Stone 1990). The Monitoring the Future project (Johnston, O'Malley & Bachman 1989) provides the most comprehensive dataset available on illicit drug abuse. In 1988, 37 percent of college students reported using an illicit drug within the past year, with dramatic decreases in all illicit drug categories since 1980, when 57 percent of students reported such use within the past year. These decreasing use patterns were documented for both men and women. Meilman, Gaylor, Turco & Stone (1990) reported similar decreases in illicit drug use in their study of a single campus over a 10-year period.

In general, the available studies on illicit (i.e., illegal) drug use among college students focus on prevalence statistics and provide a much less detailed picture of student use patterns and problems than is available for alcohol. The research literature on such drug use among college students is also extremely dated. The few recent studies are difficult to compare and suffer from many of the methodological problems noted above with respect to research on alcohol. The fact that students may be less willing to report their illegal drug use than their alcohol use may explain the lack of information on this topic. Studies of illicit drug use thus require particular attention to the development of methods of administering surveys that ensure anonymity and confidentiality.

Gaps In the Literature

Despite the overwhelming amount of information available on college students' alcohol use and on some aspects of other drug use, there are substantial gaps and problems with the available literature. These include a lack of information on ethnic minorities, nontraditional students, and high-risk groups; divergent definitions of abuse; and a lack of theoretical sophistication in models of abuse and in the development of appropriate questionnaires and methods of data analysis to test them.

Special Populations

Very little is known about the use and abuse patterns of nontraditional students and ethnic minorities in college. Surveys and data analyses are often conducted in such a way as to overlook or obscure gender differences as well, although men and women continue to demonstrate different patterns of alcohol (Berkowitz & Perkins 1987a; Perkins 1992) and other drug use (Johnston, O'Malley & Bachman 1989). Except for adult children of alcoholics, little is known about other high-risk groups.

Because such populations may differ in their substance use and related problems, it is not appropriate to apply globally derived prevention strategies and outcome goals to them.

Our knowledge base on other drug use among college students is even more deficient in these areas. More basic knowledge is needed about the predisposing motivations and negative consequences of illicit drug use and about the prevalence of polydrug use/abuse. Although substantial and theoretically sophisticated literature exists on the correlates and developmental pathways leading to illicit drug abuse among teenagers, it is not clear to what extent this literature is generallly applied to college students. Finally, very little research has been conducted on the effects of polydrug use, although such use has become increasingly common.

Nonusers

Information on the correlates of abstinence or reduced use has been overlooked in most studies, despite the increasing numbers of students who are currently choosing to reduce or eliminate drug use and despite the importance of understanding how such decisions are made. One way to obtain such information is to incorporate into surveys items that assess the extent to which students have reduced or discontinued use. The percentage of students who have reduced or discontinued use can be determined by including survey questions assessing whether or not students have ever used alcohol and other drugs. Answers to such questions provide a baseline from which the number of students who are current users can be subtracted, yielding the number of students who have discontinued use. Similarly, questions asking individuals to compare their current use with last year's use can provide estimates of individuals who have increased or decreased consumption. The relationship of abstinence, discontinuance, or changes-in-use patterns could then be assessed in relation to relevant demographic factors and other variables—such as motivation for and consequences of use. Obviously, a better understanding of the factors associated with abstinence and decreased use would have extremely important applications to the design and implementation of more effective drug prevention programs.

Definitional Problems

Researchers and practitioners often fail to agree on what constitutes abuse. In a recent comprehensive review of the literature on this topic, we noted that alcohol abuse has been variously defined in terms of the following: excessive consumption, frequent intoxication, self-identification as a problem drinker, frequent expressions of concern from others, negative or escapist motivations for drinking, and negative consequences resulting from use (Berkowitz & Perkins 1986). In a study incorporating these measures into a single survey instrument, 71 percent of the students surveyed met the criteria for one of the six problem drinking measures, although only 3 percent met the criteria for all six (Perkins & Berkowitz 1985). We concluded that problem drinking may take a variety of forms and is not a unidimensional phenomenon that can

be assessed with a single measure or composite scale. We also noted that some definitions developed for adult populations may be too broad or inclusive for young adults in college. In general, most studies have used idiosyncratic or simplistic definitions of abuse or have failed to define it at all.

The literature on illicit drug use is much less confusing because most researchers have equated any use of these drugs with abuse. However, a number of well-conducted longitudinal studies suggest that many teenagers who experiment with illicit drugs do not necessarily abuse them (Newcomb & Bentler 1988) and that those who do experiment do not necessarily have more problems than peers who abstain or develop patterns of abuse (Shedler & Block 1990). A variety of definitions taking into account quantity and frequency of use, motivations for use, and negative consequences of use should be developed for other drugs to parallel information available in the research literature on alcohol.

Because there is little consensus within the research and scholarly literature on how to define abuse, those designing surveys need to exercise judgment in selecting a definition that meets the needs of their program and that is broad enough to capture the majority of abusers. It is advisable to incorporate more than a single definition into drug surveys and to consider the usefulness of this information for outreach and informational purposes.

Theoretically Based Surveys

In general, most surveys are developed outside of any theoretical framework for understanding collegiate substance abuse, and data have been analyzed using simplistic comparisons between variables. This stands in marked contrast to the literature on illicit drug use among pre-college adolescents, where a number of researchers have developed theoretically sophisticated models examining the initiation and development of use and abuse patterns (Jessor & Jessor 1977; Kandel, 1980; Newcomb & Bentler, 1988). Such research can be studied to provide models that can guide the development of surveys and programmatic strategies within college and university settings.

The importance of theory to the design of survey questionnaires and the development of effective program strategies should not be overlooked. Rather, the relationship of theory, assessment, and practice should be seen as mutually interdependent. Any approach to assessment and practice should incorporate relevant theory, and what is learned from surveys and effective prevention programs should, in turn, be applied to these theories to modify and adapt them. The literature examining peer influences on substance use provides an excellent example of how theory can be applied to the process of survey design for college populations.

A number of well-developed theoretical frameworks have attempted to articulate the mechanisms by which these peer influences and peer perceptions operate (Gonzalez 1989; Jessor & Jessor 1977; Oetting & Beauvais 1986). The perceived or actual use patterns of peers, especially close friends, has been repeatedly

demonstrated to have more impact on young adults than personality and environmental influences and other demographic and background factors such as ethnicity, religious background, parental use patterns, and gender. Examples from this literature can be used to demonstrate how theoretical issues can be translated into survey items and then used to develop effective intervention strategies.

Gonzalez (1989) noted the importance of students' perceptions of the environment on drug use, as articulated within the health belief model. On our own campus, we have documented the role of students' misperceptions of their peers' attitudes and use patterns (Perkins & Berkowitz 1986b) and suggested ways for such information to be incorporated into prevention programming (Berkowitz & Perkins 1987b). The existence of such misperceptions has now been documented on a variety of campuses nationwide and has provided the basis for a number of innovative prevention strategies (Berkowitz, Haines & Perkins 1991; Hansen & Graham 1991) and research studies (Baer, Stacy & Larimer 1991; Prentice & Miller 1993). Questions that assess the extent of peer misperceptions, the amount and nature of "peer pressure" experienced by students, and the extent to which students are bothered by others' use can be readily incorporated into survey instruments.

Finally, developmental approaches to substance use stress the importance of critical transition periods when use may increase dramatically (Zucker & Noll 1982). In the college environment, a number of studies have documented dramatic increases in alcohol and other drug use during the first year of college (Perkins & Berkowitz 1986a; Newcomb & Bentler 1987). Questions designed to assess such changes can provide valuable information that may be incorporated into outreach activities.

Information collected from surveys documenting student misperceptions, misinformation, and responsible attitudes about use can serve as effective prevention tools when presented in the campus media or in outreach programs. Such information can help students with more responsible attitudes about drug use realize that they are actually the majority on campus. Strategies that provide such information can be used to empower the "silent majority" of responsible users to be more assertive about confronting the use and abuse patterns of peers.

Summary

To address these gaps, surveys need to incorporate questions assessing use patterns, motivations, negative consequences, and other correlates of both alcohol and other drug use, as well as obtaining demographic information on ethnicity and risk factors such as familial abuse. Questionnaire items should be included that represent a variety of different definitions of abuse and assess the factors associated with a decision to abstain or reduce use. Finally, more attention should be given to the relationship of theory to assessment and programming by developing questionnaires incorporating theoretically derived items that provide information relevant to specific prevention activities.

Alternate Applications of Alcohol and Other Drug Surveys

Alcohol and other drug surveys are most frequently conducted to provide descriptive information regarding patterns of student use and to evaluate changes and trends over time. Other uses of surveys, such as to support clinical and educational programs, are frequently overlooked. Yet surveys designed with these purposes in mind can provide valuable data for use in counseling settings and in the design and delivery of outreach programs (Perkins & Berkowitz 1986a; Berkowitz & Perkins 1987b). Such surveys incorporate questions derived from a particular theoretical perspective on substance use, such as peer influence theories, and utilize this information to affect the attitudes, perceptions, and behaviors that contribute to substance use and abuse. Well-designed surveys can also serve the evaluation process by providing more fine-grained analyses of the relative impact of program interventions on a variety of constituencies.

Counseling Applications

Survey results can be helpful to clinicians who provide individual and group counseling for students with personal, family, or friend-related problems. Counselors working with students from these groups can refer to campus statistics regarding the numbers of students affected. Such information can help a student normalize her or his experience, breaking down denial and the sense that no one else has the same problem. Similar information can be used to advertise support groups or broaden the discussions in such groups. Students who feel they are the only responsible users on a campus that they perceive as promoting irresponsible use are often relieved to find that such perceptions are often inaccurate and exaggerated. Thus, information generated from surveys can be used in counseling settings to provide students with a basis for reality testing in their experiences of peer pressures and in comparing their own or family drinking problems with those of student peers.

Educational Program Uses

The integration of research on student attitudes, behaviors, and perceptions about drug use into educational programs provides direct, ongoing feedback to students about their own behavior. Such information can be integrated into symposia, classes, and media presentations and can be used to create outreach programs tailored to the specific needs and use patterns of different campus groups. A review of the prevention literature suggests that such specifically targeted programs are more effective than generic programs directed toward the larger student body (Berkowitz 1990).

Information derived from carefully designed surveys can be used to correct misperceptions students have about campus use and abuse patterns. Such misperceptions have been shown to impact on students' own substance use (Perkins & Berkowitz 1986b; Prentice & Miller 1993; Baer, Stacy & Larimer 1991) and have been documented nationally in a variety of campus settings. Aggregate responses to

questions that assess students' attitudes toward drug use and their perceptions of the attitudes of others (friends, living unit members, or the campus as a whole) can reveal the existence of these misperceptions and can be integrated into outreach programs to correct them (Berkowitz & Perkins 1986; Berkowitz & Perkins 1987b).

The extent to which students are knowledgeable about the risks associated with different substances has been correlated with use patterns in many of studies (Bachman, Johnston, O'Malley & Humphreys 1988; Gonzalez & Haney 1990). Information on these risks and the extent to which students on campus perceive drug use to be problematic is another way in which survey results can be incorporated into outreach and prevention activities potentially to change drug use patterns.

Using Surveys for Evaluation Purposes

The process of evaluating alcohol and other drug programs has been thoroughly discussed and reviewed elsewhere (French, Fisher & Costa 1983; Greenfield, 1989; Hawkins & Nederhood, 1987). Most evaluation efforts focus on changes within the student body, such as overall, campuswide reductions in the frequency and quantity of drug use and the negative consequences of such use. This approach provides little information about the relative effectiveness of different program interventions and the extent to which these interventions may impact different program activities in the course of the academic year (Berkowitz & Perkins 1987b). This lack of comprehensiveness in program evaluation methodologies may partly explain why most efforts to summarize the conclusions of outcome studies report little or no change in high school and/or college student behavior as a result of drug prevention programs (Braucht & Braucht 1984; Goodstadt & Caleekal-John 1984; Moskowitz 1989; Oblander 1984). This problem can be addressed by including survey questions assessing the extent to which respondents are aware of or have participated in program activities. Data analysis can then examine the relationship between program participation and changes in drug use behaviors within the campus as a whole and for specific subpopulations.

Trends Toward Standardization

Currently, efforts are being made at the national level to work toward standardization of survey instruments. As a result, practitioners now have access to a few carefully developed questionnaires and uniform methods of administration and data analysis that address some of the problems reviewed. These resources are briefly summarized below.

FIPSE Grantee Developed Core Instrument and Users Manual

In 1986 Congress passed the Drug-Free Schools and Communities Act, providing federal funding for drug prevention programs in primary, secondary, and postsecondary settings. Since then, hundreds of institutions of higher education have

received funding for drug prevention activities through the Fund for the Improvement of Postsecondary Education (FIPSE). Under the auspices of FIPSE, a standardized instrument assessing alcohol and other drug use has been developed that is available to all FIPSE grantees as well as to other institutions of higher education. An Instrument Selection Committee with membership from seven representative institutions developed this questionnaire, which was designed to be compatible with other national data bases, such as the Monitoring the Future project and the Centers for Disease Control's Youth Risk Behavior Survey. For a small fee, users can purchase machine-scoreable questionnaires that are completed and sent to a central data processing center for analysis and comparison with the data from similar institutions. This project has tremendous potential for providing a national data base on substance use among college students at institutions of higher education. Such a data base could have aggregate samples large enough to assess the use patterns of understudied groups as well as to follow long-term trends and developments. To date, approximately 500,000 questionnaires have been scored and analyzed for over 800 funded institutions. The data are being aggregated on a number of variables to establish national and regional norms for alcohol and other drug use measures by class year, school type, and school size (Presley, Meilman 1991; Presley, Meilman & Lyerla 1993).

The Core Alcohol and Drug Survey User's Manual that accompanies the questionnaire reviews sampling procedures, methods of survey administration, and techniques for ensuring a high response rate (Presley, Harrold, Scouten, Lyerla & Meilman 1993). It provides a good introduction to survey administration procedures that can be used with or without the FIPSE questionnaire itself.

The usefulness of the Core Instrument is constrained by its brief length (it has only 23 questions, of which 11 are demographic) and by its complicated item ranges. The Core Instrument Committee is currently developing an optional second page supplement which will give users the option of an expanded instrument. On smaller campuses, for example, there may be insufficient numbers of nontraditional and ethnic minority students to justify asking all of the 11 questions assessing student demographics. Given their small numbers within certain campus environments, students from these groups may feel that their anonymity is compromised by being asked for so much detail about themselves. These limitations can be overcome on campuses where this is a concern by using a fewer number of the Core Instrument's demographic items and by incorporating questions from the instrument into longer surveys designed to assess a wider range of drug-related variables.

Overall, the Core Instrument provides an excellent resource for individuals who need a short questionnaire, but who do not have the support services or expertise required to score questionnaires and analyze their own data. An additional advantage is that the Core Instrument can be used to compare individual campuses with national and regional norms for similar types of schools. The most recent revision of the Core Instrument allows individual campuses to include additional questions of their own choice in addition to the standardized Core Instrument questions, thus creating some degree of flexibility for individual campus programs. (Information on the availability of the Core Instrument can be obtained from the Core Institute, Student Health Programs,

Kesnar Hall, Southern Illinois University, Wellness Center, Southern Illinois University, Carbondale, Illinois 62901; phone (618) 453-4366.)

Youth Risk Behavior Survey

The CDC has recently released a survey designed to monitor youth and young adult health behaviors and practices. However, as of November 1993 they have not collected any data. The Youth Risk Behavior Survey (YRBS) was developed by a panel of experts in conjunction with 19 federal agencies and 16 local departments of education. It includes a set of core questions for a number of health risk behaviors including alcohol and other drug use, as well as tobacco use, sexual behaviors, diet, intentional and unintentional injuries, and physical activity. (The entire instrument is available directly from the Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health, Bldg-3, Room B-15, A-14, Atlanta, GA 30333.)

Data collected with this instrument will help provide national profiles of comprehensive health risk behaviors. The questionnaire was initially developed for use with high school students but has been adapted for college students by a consortium of college and universities. The college form of the YRBS is called the YRBS-C. A limitation on this instrument is that it only assesses actual drug use behavior and not motivations, consequences, or other related variables. The core alcohol and drug questions from the Youth Risk Behavior Survey can be incorporated into a larger instrument assessing a broader range of variables. Information on the YRBS-C can be obtained from the Centers for Disease Control.

The YRBS will be used to help monitor progress toward Healthy People 2000 and toward the National Health Objectives for the Year 2000. Healthy People 2000 is a broad-based federal initiative to improve the health of all Americans over the next decade. The National Health Objectives for the Year 2000, which were released in September 1990, set measurable goals for the nation to achieve by 2000 in a variety of health-related areas—including use of alcohol and other drugs and related health behaviors (DHHS 1991). These objectives include specific goals for minority and underserved populations that reflect the needs and current health status of these groups when they are different from the majority population. A task force of the American College Health Association has participated extensively in the planning process to ensure that the final Health Objectives reflect the health needs and issues of college students (Guyton et al. 1989) and will be undertaking pilot studies using the YRBS-C on representative campuses. The objectives will be used as criteria in the awarding of many federal grants and may influence the direction of health promotion and disease prevention efforts in this country during the 1990s. Because of the importance of the Health Objectives, surveys of collegiate alcohol and other drug use would benefit from incorporating questions compatible with the Youth Risk Behavior Survey items.

Summary and Recommendations

The college drug prevention field is currently in a position to make major advances in the areas of assessment, research, and evaluation. Following a decade of research conducted with highly idiosyncratic survey instruments and methodologies, significant advances have been made toward developing standardized assessment instruments and methods of administration. The FIPSE Core Instrument and the Youth Risk Behavior Survey provide standardized formats for asking questions about alcohol and other drugs. Methods of survey administration can now be standardized, as well, by using the FIPSE Users Manual. When information collected through these surveys is centralized, it will be possible to analyze and evaluate prevalence and incidence rates, trends, and use patterns of special populations and high-risk groups on a national scale. In addition, data generated through standardized instruments will provide a basis for comparison with pre-college youth and peers of the same age who are not in college.

The design and administration of surveys for assessment purposes is best seen as an ongoing process involving awareness of program goals and strategies, current theories and knowledge, and methods for evaluating and providing feedback about current use patterns and eventual program results. The process begins with the identification of program goals and intervention strategies that incorporate or apply current knowledge and theories about drug use. This is followed by step-by-step descriptions of program goals and by the development of questionnaire items that can provide relevant information. In this way, the value of surveys in providing needs assessments, program evaluations, and information that can be used in outreach and counseling efforts is maximized.

The following summary highlights points to be considered in developing survey instruments:

1. Incorporate questions assessing use patterns, motivations, negative consequences, and other correlates for both alcohol and other drugs. Attempt to use questions that have an explicit theoretical rationale and/or programmatic application.

2. Obtain demographic information that incorporates members of campus subpopulations and groups for whom current knowledge is lacking (ethnic minorities, nontraditional students, abstainers, high-risk populations, and individuals who have reduced their use).

3. Use standardized instruments or incorporate questions from them into campus surveys to provide a means of comparison with information from other institutions with similar characteristics.

4. Generate information that can be used for counseling and outreach purposes and that can provide meaningful information to the campus community about itself.

5. Incorporate measures of participation in program activities to assess more accurately (1) the relative impact of these interventions and (2) the cumulative impact of participation in multiple interventions.

Neither of the two instruments discussed here is comprehensive enough to include questions in all five areas. Because of the complexity and difficulty of developing and administering large surveys of this nature, drug prevention program personnel should consider consulting and collaborating with faculty members who have expertise in survey construction, administration, and data analysis. The opportunity for such collaboration is frequently overlooked.

In summary, the lack of standardization among survey instruments used to assess drug use and abuse among college students has created numerous problems for both practitioners and researchers. The lack of standardization has made it extremely difficult to compare data across studies. Two recent efforts toward the development of standardized instrumentation may help to solve this problem and provide access to large datasets tracking use patterns over time. As the Youth Risk Behavior Survey and the FIPSE Core Instrument differ, researchers and practitioners now have the opportunity to choose from two carefully developed instruments.

Checklist on Assessment

- ☐ Has your institution instituted survey questions assessing whether or not students have ever used alcohol and other drugs?
- ☐ Has your institution developed surveys based upon theoretical frameworks for understanding collegiate substance abuse?
- ☐ Does your survey incorporate questions designed to assess the extent of peer misperceptions regarding peer attitudes and use patterns and the amount and nature of "peer pressure" experienced by students?
- ☐ Do your surveys incorporate questions assessing use patterns motivations, and negative consequences and other correlates of alcohol and other drug use?
- ☐ Do your questionnaire items represent a variety of different definitions of abuse and assess factors associated with decisions to abstain or reduce use?
- ☐ Are survey results (e.g., student attitudes, behaviors and perceptions) used in educational programs to provide feedback to students about their behavior?
- ☐ Have you incorporated questions assessing use patterns, motivations, negative consequences, and other correlates for both alcohol and other drugs?
- ☐ Have you obtained demographic information that incorporates members of the campus subpopulations and groups for whom current knowledge is lacking (e.g., ethnic minorities, nontraditional students, abstainers, high-risk populations, and individuals who reduced their use)?
- ☐ Have you consulted or collaborated with faculty members who have expertise in survey construction, administration and data analysis?
- ☐ Have you used any nationally standardized instruments in your program?
- ☐ Have you used survey results to modify campus prevention programs?
- ☐ What has been the generalizability of your results?

Appendix

A. FIPSE Pre/Post Core Instrument
B. Example survey items assessing peer influence variables
C. Example evaluation questionnaire
D. Healthy People 2000 Fact Sheet

A. FIPSE Pre/Post Core Instrument

Form 191

Core Alcohol and Drug Survey

For use by two- and four-year institutions

FIPSE Core Analysis Grantee Group

USE NO. 2 PENCIL ONLY

Please use a number 2 pencil.

Processed by UCS Office of Measurement Services
University of Minnesota
2520 Broadway Drive - Room 130
St. Paul, MN 55113

For additional use:

A 0 1 2 3 4 5 6 7 8 9
B 0 1 2 3 4 5 6 7 8 9
C 0 1 2 3 4 5 6 7 8 9
D 0 1 2 3 4 5 6 7 8 9
E 0 1 2 3 4 5 6 7 8 9

1. Classification:
- Freshman ○
- Sophomore ○
- Junior ○
- Senior ○
- Grad/professional ○
- Not seeking a degree ○
- Other ○

2. Age:

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

3. Ethnic origin:
- American Indian/Alaskan Native ○
- Hispanic ○
- Asian/Pacific Islander ○
- White (non-Hispanic) ○
- Black (non-Hispanic) ○
- Other ○

4. Marital status:
- Single ○
- Married ○
- Separated ○
- Divorced ○
- Widowed ○

5. Gender:
- Male ○
- Female ○

6. Is your current residence as a student:
- On-campus ○
- Off-campus ○

7. Are you working?
- Yes, full-time ○
- Yes, part-time ○
- No ○

8. Living arrangements

A. Where: *(mark best answer)*
- House, apartment, etc. ○
- Residence hall ○
- Approved housing ○
- Fraternity or sorority ○
- Other ○

B. With whom: *(mark all that apply)*
- With roommate(s) ○
- Alone ○
- With parent(s) ○
- With spouse ○
- With children ○
- Other ○

9. Approximate cumulative grade average: *(choose one)*

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
○	○	○	○	○	○	○	○	○	○	○	○	○

10. Some students have indicated that alcohol or drug use at parties they attend in and around campus reduces their enjoyment, often leads to negative situations, and therefore, they would rather not have alcohol and drugs available and used. Other students have indicated that alcohol and drug use at parties increases their enjoyment, often leads to positive situations, and therefore, they would rather have alcohol and drugs available and used. Which of these is closest to your own view?

	Have available	Not have available
With regard to drugs?	○	○
With regard to alcohol?	○	○

11. Student status:
- Full-time (12+ credits) ○
- Part-time (1-11 credits) ○

12. Campus situation on alcohol and drugs:

	yes	no	don't know
a. Does your campus have drug and alcohol policies?	○	○	○
b. If so, are they enforced?	○	○	○
c. Does your campus have a drug and alcohol prevention program?	○	○	○
d. Do you believe your campus is concerned about the prevention of drug and alcohol use?	○	○	○
e. Are you actively involved in efforts to prevent drug and alcohol use problems on your campus?	○	○	

13. Place of permanent residence:
- In-state ○
- USA, but out of state ○
- Country other than USA ○

14. Think back over the last two weeks. How many times have you had five or more drinks* at a sitting?
- None ○
- Once ○
- Twice ○
- 3 to 5 times ○
- 6 to 9 times ○
- 10 or more times ○

15. Average # of drinks* you consume a week

(If less than 10, code answer as 01, 02, etc.)

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

*A drink is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink.

16. At what age did you first use... *(mark one for each line)*

	Never	Under 10	10-11	12-13	14-15	16-17	18-20	21-25	26+
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)*	○	○	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○	○	○
e. Amphetamines (diet pills, speed)	○	○	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○	○	○
l. Other illegal drugs	○	○	○	○	○	○	○	○	○

*Other than a few sips

17. Within the last year about how often have you used . . . *(mark one for each line)*

	Never used	Once/year 6 times/year	Once month	Twice month	Once/week 3 times/week	5 times/week	Every day
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○
e. Amphetamines (diet pills, speed)	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○
l. Other illegal drugs	○	○	○	○	○	○	○

18. During the past 30 days, on how many days did you have: *(mark one for each line)*

	0 days	1-2 days	3-5 days	6-9 days	10-19 days	20-29 days	All 30 days
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○
e. Amphetamines (diet pills, speed)	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○
l. Other illegal drugs	○	○	○	○	○	○	○

19. How often do you think the average student on your campus uses . . . *(mark one for each line)*

	Never used	Once/year 6 times/year	Once month	Twice month	Once/week 3 times/week	5 times/week	Every day
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○
e. Amphetamines (diet pills, speed)	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○
j. Designer drugs (ecstacy, MDMA)	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○
l. Other illegal drugs	○	○	○	○	○	○	○

20. Where have you used . . . *(mark all that apply)*

	Never used	On campus: Residence hall	On campus: events	Where you live: Bar, restaurant, Frat, sorority	Where you live: In a car	Private parties	Other
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○
e. Amphetamines (diet pills, speed)	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○
j. Designer drugs (ecstacy, MDMA)	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○
l. Other illegal drugs	○	○	○	○	○	○	○

21. Please indicate how often you have experienced the following due to your drinking or drug use during the last year . . . *(mark one for each line)*

	Never	Once	Twice	3-5 times	6-9 times	10 or more times
a. Had a hangover	○	○	○	○	○	○
b. Performed poorly on a test or important project	○	○	○	○	○	○
c. Been in trouble with police, residence hall, or other college authorities	○	○	○	○	○	○
d. Damaged property, pulled fire alarm, etc	○	○	○	○	○	○
e. Got into an argument or a fight	○	○	○	○	○	○
f. Got nauseated or vomited	○	○	○	○	○	○
g. Driven a car while under the influence	○	○	○	○	○	○
h. Missed a class	○	○	○	○	○	○
i. Been criticized by someone I know	○	○	○	○	○	○
j. Thought I might have a drinking or other drug problem	○	○	○	○	○	○
k. Had a memory loss	○	○	○	○	○	○
l. Done something I later regretted	○	○	○	○	○	○
m. Been arrested for DWI/DUI	○	○	○	○	○	○
n. Have been taken advantage of sexually	○	○	○	○	○	○
o. Have taken advantage of another sexually	○	○	○	○	○	○
p. Tried to unsuccessfully stop using	○	○	○	○	○	○
q. Seriously thought about suicide	○	○	○	○	○	○
r. Seriously tried to commit suicide	○	○	○	○	○	○
s. Been hurt or injured	○	○	○	○	○	○

22. Have any of your family had alcohol or other drug problems: *(mark all that apply)*

- ○ Mother
- ○ Father
- ○ Stepmother
- ○ Stepfather
- ○ Brothers/sisters
- ○ Mother's parents
- ○ Father's parents
- ○ Aunts/uncles
- ○ Spouse
- ○ Children
- ○ None

23. If you volunteer any of your time on or off campus to help others, please indicate the approximate number of hours per month and principal activity:

- ○ Don't volunteer, or less than 1 hour
- ○ 1-4 hours
- ○ 5-9 hours
- ○ 10-15 hours
- ○ 16 or more hours

Principal volunteer activity is: _____

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B. Example survey items assessing peer influence variables (from Perkins & Berkowitz 1989 Health and Well-Being Survey and Perkins & Berkowitz 1990 Health and Well-Being Follow-up Survey. Complete questionnaires may be obtained from the author).

Misperceptions of alcohol and other drug use:

1. How many drinks (one drink is defined as a beer, a glass of wine, a shot of liquor, or a mixed drink), on the average, do you think most students have when they "party"?

_____

2. When you "party," how many drinks do you have on the average? (Again one drink is defined as a beer, a glass of wine, a shot of liquor, or a mixed drink.)

_____

3. Which of the statements about drinking alcoholic beverages below do you feel best represents: A) your own attitude, B) the most common attitude among your closest friends, C) the most typical attitude in your living unit, and D) the most common attitude of students in general on this campus. Indicate your choices by circling the number which corresponds to the chosen statement representing A through D.

(1) Drinking is never a good thing to do.

(2) Drinking is all right but a person should never get "smashed."

(3) An occasional "drunk" is okay as long as it doesn't interfere with academics or other responsibilities.

(4) An occasional "drunk" is okay even if it does interfere with academics or responsibilities.

(5) A frequent "drunk" is okay if that's what the individual wants to do.

A. Your own attitude	1	2	3	4	5
B. Closest friends	1	2	3	4	5
C. Your living unit	1	2	3	4	5
D. Campus in general	1	2	3	4	5

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4. Which of the statements below best represents your own attitude, the most common attitude among your closest friends, and the most common attitude of students in general on this campus concerning marijuana use and cocaine use. Indicate your choices by circling the number which corresponds to the chosen statement for each category (A through F).

(1) It is never a good thing to use.

(2) Occasional use is okay as long as it doesn't interfere with academic or other responsibilities.

(3) Occasional use is okay even if it does interfere with academic or other responsibilities.

(4) Frequent use is okay if that's what the individual wants to do.

Marijuana

A. Your own attitude	1	2	3	4
B. Closest friends	1	2	3	4
C. Campus in general	1	2	3	4

Cocaine

D. Your own attitude	1	2	3	4
E. Closest friends	1	2	3	4
F. Campus in general	1	2	3	4

(See Perkins & Berkowitz, 1986b for information on assessment of peer misperceptions and their relationship to drinking behavior)

Other Peer-related variables

5. How often does someone else's drinking interfere with your study, sleep, or other things you've wanted to do?

____(1) several times a week
____(2) almost every week
____(3) almost twice a month
____(4) almost once a month
____(5) a few times a year
____(6) never

6. How often do you find yourself in situations where you are encouraged to drink more than you would like to?

____(1) several times a week
____(2) almost every week
____(3) almost twice a month
____(4) almost once a month
____(5) a few times a year
____(6) never

Questions assessing perceptions of risk associated with use and peer disapproval of use (from the Monitoring the Future 1990 follow-up survey instrument).

7.

Individuals differ in whether or not they disapprove of people doing certain things. Do YOU disapprove of people (who are 18 or older) doing each of the following?
(Mark one circle for each line.)

	Don't Disapprove	Disapprove	Strongly Disapprove
a. Smoking one or more packs of cigarettes per day	1	2	3
b. Trying marijuana once or twice	1	2	3
c. Smoking marijuana occasionally	1	2	3
d. Smoking marijuana regularly	1	2	3
e. Trying cocaine in powder form once or twice	1	2	3
f. Taking cocaine powder occasionally	1	2	3
g. Taking cocaine powder regularly	1	2	3
h. Trying "crack" cocaine once or twice	1	2	3
i. Taking "crack" cocaine occasionally	1	2	3
j. Taking "crack" cocaine regularly	1	2	3
k. Trying one or two drinks of an alcoholic beverage (beer, wine, liquor)	1	2	3
l. Taking one or two drinks nearly every day	1	2	3
m. Taking four or five drinks nearly every day	1	2	3
n. Having five or more drinks once or twice each weekend	1	2	3
o. Take steroids for body-building or improved athletic performance	1	2	3

8.

The next questions ask for your opinions on the effects of using certain drugs and other substances. How much do you think people risk harming themselves (physically or in other ways), if they ...

	No Risk	Slight Risk	Moderate Risk	Great Risk	Can't Say, Drug Unfamiliar
a. Smoke one or more packs of cigarettes per day	1	2	3	4	5
b. Try marijuana once or twice	1	2	3	4	5
c. Smoke marijuana occasionally	1	2	3	4	5
d. Smoke marijuana regularly	1	2	3	4	5
e. Try cocaine in powder form once or twice	1	2	3	4	5
f. Take cocaine powder occasionally	1	2	3	4	5
g. Take cocaine powder regularly	1	2	3	4	5
h. Try "crack" cocaine once or twice	1	2	3	4	5
i. Take "crack" cocaine occasionally	1	2	3	4	5
j. Take "crack" cocaine regularly	1	2	3	4	5
k. Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	1	2	3	4	5
l. Take one or two drinks nearly every day	1	2	3	4	5
m. Take four or five drinks nearly every day	1	2	3	4	5
n. Have five or more drinks once or twice each weekend	1	2	3	4	5
o. Take steroids for body-building or improved athletic performance	1	2	3	4	5

C. Example evaluation questionnaire

Check below those services which you are aware of as health and wellness services or activities on this campus and then check any which you have personally used or attended during this academic year.

Please also indicate your evaluation or impression of the helpfulness of each service as it exists. Base your assessment on your own experience if you have used or attended the service, or on other students' comments if you have not personally used/attended it (leave blank only if you have no impression at all).

	(check all that apply) aware of service	used or attended	Evaluation or Impression of Helpfulness 1=Very, 2=Somewhat, or 3=Not at all (circle one)		
(1) Physician services	____	____	1	2	3
(2) Nursing care staff	____	____	1	2	3
(3) Orthopedic clinic	____	____	1	2	3
(4) Women's clinic & nurse practitioner services	____	____	1	2	3
(5) HIV/AIDS testing	____	____	1	2	3
(6) Lecture/class on AIDS	____	____	1	2	3
(7) Condom dispensers	____	____	1	2	3
(8) ORAP event	____	____	1	2	3
(9) SHAC party/event	____	____	1	2	3
(10) Health peer advisors	____	____	1	2	3
(11) Individual alcohol/drug abuse counseling	____	____	1	2	3
(12) Individual counseling on friend's/parent's alcohol/drug abuse	____	____	1	2	3
(13) Other individual counseling	____	____	1	2	3
(14) Lecture/class on alcohol/drug abuse	____	____	1	2	3
(15) Group counseling for personal or parent alcohol/drug use	____	____	1	2	3
(16) Term abroad health-risk orientation	____	____	1	2	3
(17) Residence hall presentation on alcohol/drug use, "party pursuit" program	____	____	1	2	3
(18) Rape prevention & education workshop	____	____	1	2	3

Note: this question should be adapted to include a list of all drug prevention program activities on your campus, as well as related services you are interested in assessing. Results can then be evaluated to determine the effect of participation in particular services, the cumulative impact of partipating in a number of activities, and the degree to which knowledge of or impression of various services is important.
(from Perkins and Berkowitz, Health and Well-Being Survey, 1989)

D. Healthy People 2000 Fact Sheet

FACT SHEET

National Health Promotion and Disease Prevention Objectives

Healthy People 2000 is a broad-based initiative led by the U.S. Public Health Service (PHS) to improve the health of all Americans through an emphasis on the prevention, not just the treatment, of health problems over the next decade. Forming the cornerstone of this effort are national health objectives to reduce preventable death, disease, and disability.

The National Health Promotion and Disease Prevention Objectives for the Year 2000 will be released at a conference in Washington, DC, on September 6-7, 1990. Dr. Louis W. Sullivan, Secretary of Health and Human Services, is inviting 1,500 national, State, and local leaders from the public and private sectors to the conference to help launch the initiative.

The year 2000 health objectives succeed the 1990 health objectives set in 1980. While significant improvements have been made in the Nation's health profile over the past decade, gains have not been universal. Many of the new objectives will aim specifically at improving the health status of certain groups of people who bear a disproportionate share of disease, disability, and premature death compared to the general population. This emphasis will be especially critical in the 1990s since many of these groups will also be experiencing a faster rate of growth than the population as a whole.

The publication of the health objectives, *Healthy People 2000*, will set out a prevention agenda for the 1990s with quantifiable targets for improving health status, reducing risk factors for disease and disability, and improving services. Emerging from the final drafting phase are priorities in the areas of health promotion, health protection, and preventive services. The specific health problems of different age groups will be highlighted in separate sections of *Healthy People 2000*, as will the need for surveillance and data system improvements.

Priorities

Health Promotion
Physical Activity and Fitness
Nutrition
Tobacco
Alcohol and Other Drugs
Family Planning
Mental Health
Violent and Abusive Behavior
Educational and Community-Based Programs

Health Protection
Unintentional Injuries
Occupational Safety and Health
Environmental Health
Food and Drug Safety
Oral Health

Preventive Services
Maternal and Infant Health
Heart Disease and Stroke
Cancer
Other Chronic and Disabling Conditions
HIV Infection
Sexually Transmitted Diseases
Immunization and Infectious Diseases
Clinical Preventive Services

Age-Related
Healthy Children
Healthy Adolescents and Youth
Healthy Older People

Surveillance and Data Systems

The wide range of public and private organizations involved in the development of the health objectives is evidence of growing social commitment and accountability for health. In addition to Federal agencies, nearly all State health departments, a large number of public health experts, and many concerned citizens have participated in the development process, as well as over 300 national organizations representing the corporate, professional, and voluntary sectors. Because of the broad scope of the objectives, sustained support over the next decade from such a diverse base will be critical for their achievement.

Public Health Service
U.S. Department of Health and Human Services

Coordinator: ODPHP
Room 2132, 330 C Street SW
Washington, DC 20201
(202) 472-5307
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Healthy People 2000

Healthy People 2000: National Health Promotion and Disease Prevention Objectives will be released at the conference. In addition to the objectives, the report will review progress made in the Nation's health during the 1980s and set broad goals for the decade leading up to the year 2000. To receive an order form, write to:

ODPHP National Health Information Center
P.O. Box 1133
Washington, DC 20013-1133

Putting Healthy People 2000 Into Practice

Healthy People 2000 Consortium. In late 1987, PHS and the Institute of Medicine (IOM) of the National Academy of Sciences began to bring together a broad range of groups with a shared interest in health to participate in the Healthy People 2000 initiative. Over 300 organizations now belong to the Consortium, representing the professional, voluntary, and corporate sectors, as well as State and Territorial health departments. Consortium members contributed to the process of public hearings and expert reviews that shaped the year 2000 health objectives, and many are now initiating activities to help achieve the objectives over the next decade.

IOM manages the ongoing activities of the Healthy People 2000 Consortium. National membership organizations that are interested in joining the Consortium should contact Michael Stoto, Ph.D., at IOM: 202-334-3935.

Healthy Communities 2000: Model Standards. This companion publication is intended to be used by communities to help put the year 2000 health objectives into practice at the State and local levels. Due out in late 1990, this updated edition of *Model Standards* is being prepared as a collaborative effort of the American Public Health Association and four other national health organizations, in cooperation with the Centers for Disease Control. For more information, contact Kay Loughrey at APHA: 202-789-5618.

Healthy People 2000 Cooperative Agreements. Many of the year 2000 health objectives aim specifically at improving the health of certain populations that are at higher risk for disease, disability, or premature death. To help stimulate programs targeted at these high-risk groups, the Office of Disease Prevention and Health Promotion has entered into cooperative agreements with national membership organizations that represent these special populations, as well as effective community-based settings for health promotion and disease prevention.

American Indians/Alaska Natives: American Indian Health Care Association
Asian/Pacific Islanders: Asian American Health Forum
Blacks: National Medical Association
Hispanics: National Coalition of Hispanic Health and Human Services Organizations
Adolescents: American Medical Association (in cooperation with the AMA National Adolescent Health Coalition of 30 national organizations)
Older People: American Association of Retired Persons (with the National Council on the Aging)
People with Disabilities: American Association of University Affiliated Programs for Persons with Developmental Disabilities (with the Association for Retarded Citizens of the United States, The Epilepsy Foundation of America, Inc., the United Cerebral Palsy Association, Inc., and the Association of Maternal and Child Health Programs)
Children in Schools: American Association of School Administrators
Worksites: National Worksite Health Promotion Resource Center (Washington Business Group on Health)
Clinical Settings: American Hospital Association

References

Anderson, D.S., & Gadaleto, A.F. (1984). Progress or illusion: The 1979 and 1982 college alcohol surveys. Journal of College Student Personnel, 25, 332-337.

Anker, J.L., Milman, D.H., Kahan, S.A., & Valenti, C. (1971). Drug usage and related patterns of behavior in university students. 1. General survey and marijuana use. Journal of American College Health, 178-186.

Bachman, J.G., Johnston, L.O., O'Malley, P.M., & Humphrey, R.N. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. Journal of Health and Social Behavior, 29, 92-112.

Baer, J.S., Stacey, A., & Larimer, M. (1991) Biases in the perception of drinking norms among students. Journal of Studies on Alcohol, 52, 580-86.

Berkowitz, A.D. (1990). Reducing alcohol and other drug use on campus: Effective strategies for prevention programs. Eta Sigma Gamman, 22(1), 12-14.

Berkowitz, A.D., Haines, M., & Perkins, H.W. (1991). Changing student misperceptions of drug use norms: Educational, program and clinical strategies. Paper presented at the Drug Prevention Programs in Higher Education Conference, Washington, DC.

Berkowitz, A.D., & Perkins, H.W. (1986). Problem drinking among college students: A review of recent research. Journal of American College Health, 35(1), 21-28.

_____ (1987a). Recent research on gender differences in collegiate alcohol use. Journal of American College Health, 36, 123-129.

_____ (1987b). Current issues in effective alcohol education programming. In J. S. Sherwood (Ed.), Alcohol Policies and Practices on College and University Campuses, Monograph Series, Vol. 7, National Association of Student Personnel Administrators.

Braucht, N.B., & Braucht, B. (1984). Prevention of problem drinking among youth: Evaluation of educational strategies. In P.M. Miller & T.D. Nerenberg (Eds.), Prevention of Alcohol Abuse. New York: Plenum Press.

Brennan, A.F., Walfish, S., & AuBuchon, P. (1986). Alcohol use and abuse in college students. II. Social-environmental correlates, methodological issues, and implications for intervention. International Journal of Addictions, 21(4-5), 457-493.

Department of Health and Human Services. (1991). Healthy People 2000: National health promotion and disease prevention objectives (DHHS Publication No.

PHS91-50212). Washington, DC: U.S. Government Printing Office, Superintendent of Documents.

Engs, R.C. (1977). Drinking patterns and drinking problems of college students. Journal of Student Alcohol, 38, 2144-2156.

Engs, R.C., & Hanson, D.J. (1985). The drinking patterns and problems of college students: 1983. Journal of Alcohol and Drug Education, 31, 64-83.

French, J.F., Fisher, C.C., & Costa, S.J., Jr. (1983). Working with evaluators: A guide for drug abuse prevention program managers (DHHS Pub. No. ADM 88-1233). Rockville, MD: National Institute on Drug Abuse.

Gadaleto, A.F., & Anderson, D.S. (1986). Continued progress: The 1979, 1982, and 1985 college alcohol survey. Journal of College Student Development, 30(6), 492-503.

Gonzalez, G.M. (1989). An integrated theoretical model for alcohol and other drug abuse prevention on campus. Journal of College Student Development, 30(6), 492-503.

Gonzalez, G.M., & Haney, M.L. (1990). Perceptions of risk as predictors of alcohol, marijuana, and cocaine use among college students. Journal of College Student Development, 31, 313-318.

Goodstadt, M.S., & Caleekal-John A. (1984). Alcohol education programs for university students: A review of their effectiveness. International Journal of the Addictions, 19, 721-741.

Greenfield, T.K. (1989). Evolution and assessment. In A winning combination: An alcohol, other drug, and traffic safety handbook for college campuses. Washington, DC: U.S. Department of Transportation.

Guyton, R., Corbin, S., Zimmer, C., O'Donnell, M., Chervin, D.D., Sloane, B.C., & Chamberlain, M.D. (1989). College students and national health objectives for the year 2000: A summary report. Journal of American College Health, 38, 9-14.

Hansen, W.B., Graham, J.W. (1991). Preventing alcohol, marijuana, and cigarette use among adolescents: Peer pressure resistance training versus establishing conservative norms. Preventive Medicine, 20, 414-430.

Hawkins, J.D., & Nederhood, B. (1987). Handbook for evaluating drug and alcohol prevention programs: Staff/Team Evaluation of Prevention Programs (STEPP) (DHHS Pub. No. ADM 87-1512). Washington, DC: Office for Substance Abuse Prevention.

Jessor, R., & Jessor, S.L. (1977). Problem behavior and psychosocial development: A longitudinal study of youth. New York: Academic Press.

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1989). Drug use, drinking and smoking. In National survey results from high school, college and young adult populations, 1975-1980 (DHHS Pub. No. ADM 89-1638). Rockville, MD: National Institute on Drug Abuse.

Kandel, D.B. (1980). Drug and drinking behavior among youth. Annual Review Sociology, 6, 235-285.

Meilman, P.W., Gaylor, M.S., Turco, J.H., & Stone, J.E. (1990). Drug use among college undergraduates: Current use and 10-year trends. International Journal of the Addictions, 25(9), 1019-1030.

_____ (1990). Alcohol use among undergraduates: Current use and 10-year trends. Journal of Studies on Alcohol, 51(5), 389-395.

Moskowitz, J.M. (1989). The primary prevention of alcohol problems: A critical review of the research literature. Journal of Studies on Alcohol, 50(1), 54-88.

Newcomb, M., & Bentler, P.M. (1987). Changes in drug use from high school to young adulthood: Effects of living arrangement and current life pursuit. Journal of Applied Developmental Psychology, 8, 221-246.

_____ (1988). Consequences of adolescent drug use: Impact on the lives of young adults. Sage: Newbury Park.

Oblander, F.W. (1984). Effective alcohol education strategies. ACU-I Bulletin, 52, 17-25.

Oetting, E.R., & Beauvais, F. (1986). Peer cluster theory: Drugs and the adolescent. Journal of Counseling and Development, 65(1), 17-22.

Perkins, H.W. (1992). Gender patterns with consequences of collegiate alcohol abuse: A ten year study of trends with an undergraduate population. Journal of Studies in Alcohol, 53,458-462.

Perkins, H.W., & Berkowitz, A.D. (1985). Conceptual and methodological difficulties in defining problem drinking among college students: Research findings from an extensive campus survey. Paper presented at the Annual Meeting of the American College Health Association, Washington, DC.

_____ (1986a). Using student alcohol surveys: Notes on clinical and educational program applications. Journal of Alcohol and Drug Education, 31(2), 44-51.

_____ (1986b). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. International Journal of the Addictions, 21(9/10), 961-976.

Prentice, D.A. & Miller, D.T. (1993). Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norms. Journal of Personality and Social Psychology, 64, 243-256.

Presley, C., Harrold, R., Scouten, E., & Lyerla, R. (1990). Core pre/post evaluation instrument user's manual.

Presley, C.A., & Meilman, P.W. (1991). Alcohol and drugs on the American college campus: A report to college presidents. Carbondale, IL: Southern Illinois University Press.

Presley, C.A., Meilman, P.W. & Lyerla, R. (1993). Alcohol and drugs on American colleges campuses: Use consequences, and perceptions of the campus environment, 8, 1989-1991. The Core Institute, Southern Illinois University, Carbondale.

Saltz, R., & Elandt, D. (1986). College student drinking studies, 1976-1985. Contemporary Drug Problems, 13, 117-159.

Shedler, J., & Block, J. (1990). Adolescent drug use and psychological health. American Psychologist, 45, 612-630.

Temple, M. (1986). Trends in collegiate drinking in California, 1979-1984. Journal of Studies on Alcohol, 47, 274-282.

Wechsler, H., & McFadden, M. (1979). Drinking among college students in New England. Journal of Studies on Alcohol, 40, 969-996.

Zucker, R.A., & Noll, R.D. (1982). Precursors and developmental influences on drinking and alcoholism: Etiology from a longitudinal perspective. In Alcohol and Health Monograph #1: Alcohol Consumption and Related Problems (DHHS Pub. No. ADM 82-1190). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

VII

Responses to the Four Articles

Reactions from a Metropolitan Campus[10]

Introduction

Data released by the U.S. Department of Education indicate that students over 25 years of age represented 41.5 percent of students enrolled on college campuses in 1988 and that this group will continue to represent a substantial proportion of campus enrollments in the future (Gerald, Horn & Husser 1989, p. 3). These people are frequently part-time students and have other major commitments in their lives. For example, they are husbands and wives, parents, full-time employees, members of religious organizations, and participants in clubs and service organizations. They have many demands on their time. If you were to ask these people to describe their roles, they may not list "student" at all.

Rhatigan (1986) indicated that there are at least 256 different kinds of students—based on a variety of characteristics (i.e., marital status, working or not working, with or without children)—who attend metropolitan universities. Jacoby (1990) reported that commuters comprise 80 percent of the students attending colleges and universities in the United States. She observed that educators have assumed incorrectly that commuters are "like resident students except they live off campus," and they also have assumed incorrectly that these disparate groups of people have similar curricular and extracurricular needs.

This section is not intended to be a lengthy treatise on the metropolitan university student; however, one should be aware of the socioeconomic factors that shape the experiences of students attending these institutions. Jones and Damron (n.d.) pointed out that students who attend urban institutions typically have less money than those who attend nonurban institutions. Their parents also have less money and contribute less to these students' educational pursuits. Students at urban universities must work outside of school more often than students at residential colleges, and they view work as a necessary part of life. Frequently they are married, have children, take longer

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[10] John H. Schuh, Wichita State University, author.

to complete their education, and are active in organizations within their communities. These characteristics are considered in the response to the previous sections from the perspective of metropolitan university personnel.

For this review, the preceding sections of this compendium will be viewed through the lens of a student affairs administrator affiliated with a metropolitan (also known as a commuter or urban) institution. First, the *metropolitan university* will be defined. Then a metaphor will be introduced that illustrates the metropolitan university. Finally, a reaction to the preceding sections using a metropolitan lens will be offered.

The Metropolitan University

According to Pascarella and Terenzini (1991), about one-third of all campuses are commuter institutions. Many of these institutions of higher education are located in metropolitan areas but are not necessarily "metropolitan universities." Bonner (cited by Grobman 1988, p. 4) defined "metropolitan university" as an institution ". . . not merely . . . located *in* a city; it is also *of* the city, with an obligation to serve the needs of the city's diverse citizenry." Grobman pointed out that ". . . all universities located in cities are not urban universities; a university located in a city may simply be a resident of that city with few interactions between the city and the university" (1988, p. 9).

The metropolitan university is a relatively recent phenomenon; most of these institutions have grown up since World War II (Wagner 1990) and are still evolving, attempting to determine their educational niche in the urban area they serve. They tend to have an older student population. At times they struggle because of the inevitable comparisons that result when they are viewed with the same lens as their counterparts (that have traditional-age students who live on or near campus and for whom college is the primary activity in their lives). Perhaps the following metaphor will assist in describing the metropolitan university further.

The Shopping Center Metaphor

Regional shopping centers in many areas of our country have become the place where many people do most of their shopping. These malls are located in areas of town with ample parking; they often have three or more large "anchor" stores; and they are the kinds of places where people can spend all day. Food courts, movie theaters, and other forms of recreation are located either in or near the malls, and the malls frequently have other forms of entertainment available.

Regional shopping centers have their drawbacks. The malls themselves often are owned by people from other states. The anchor stores are parts of conglomerates, and even the specialty stores frequently are part of a chain of stores. Customers do not know the owners and are even lucky to know a manager or employee.

When customers go to shopping malls they rarely know their fellow shoppers, unless by chance they meet one of their neighbors. Shopping at a mall is a somewhat impersonal activity, although it can be highly efficient because one does not drive all over town to finish shopping.

Are shopping malls good? That all depends on one's point of view. If the objective of shopping at a mall is to conclude one's business efficiently, then they are great. But shopping at a mall is not an effective socializing experience because it tends to be impersonal. A more lengthy discussion of the shopping mall metaphor is included in Schuh, Andreas, and Strange (1991).

The metropolitan university also functions, at times, like a shopping mall. It is a place where a person can participate in a variety of educational experiences without having to be immersed in the process. Everyone is welcome. There is no expectation that students take a prescribed number of courses. They may attend during the day or at night. Students choose to be as involved in their educational experience as they wish.

Although the shopping center metaphor is not applicable to all students and all metropolitan universities, the point is that educational experiences at metropolitan universities can be very different from those of traditional-age students at residential colleges. Similarly, students' experience with alcohol and other drugs varies from metropolitan universities to residential campuses. This is the lens through which the metropolitan university should be compared to other schools.

Reaction to the Other Sections

Gonzalez Section. Gonzalez' most relevant comment is that there is a growing realization in the prevention field that comprehensive, community-based approaches are needed. This is critical at metropolitan colleges for the reasons given below.

The amount of time that metropolitan college students spend on campus is limited. These students drive to campus, participate in an activity or two, and then go home. At my campus, for example, *home* means a place owned by the students, since as many students own their homes as live at home with their parents. The average age of our student body is 28. Our students are parents, spouses, and so on. For prevention programs to be focused on capturing students' attention only while they are on campus is hardly worth the effort since (1) students are on campus for a limited amount of time, and (2) they attend classes at various times from 8 a.m. to 10 p.m. A program scheduled for a particular portion of the day would miss the vast majority of students who attend the university. As a result, other models, based in the community, would be far more effective than the traditional models focused on the student's campus residence (i.e., residence hall, fraternity, or apartment located near the campus).

Those responsible for developing programs designed to combat the abuse of alcohol and other drugs would be best advised to use a community-based approach

as the point of departure. For example, one concerned with the abuse of alcohol and other drugs on the part of metropolitan college students should consider looking for sources of information about substance abuse outside of the campus. On a residential campus, such sources of information as the campus police department, the student health service, the campus physical plant, and the student conduct office all provide useful information to persons interested in assessing the influence of substance abuse on student behavior. These offices may not be as helpful on a metropolitan campus. Instead, the local police department, hospitals and clinics, social service agencies, and churches all have information about their clients—who also may attend the local metropolitan university. Gathering information from these sources would be one way of determining the extent of substance abuse among metropolitan students who probably use community-based, rather than campus-based, resources.

Gilchrist Section. The description of testing the inoculation strategy in junior and senior high schools is irrelevant for students who attend metropolitan institutions. Such testing has little applicability to a situation where many students, perhaps the majority on some campuses, are 30 years of age and older.

Gilchrist described the person-in-environment approach as being useful because colleges are self-contained environments. That is true for the traditional residential campus attended by traditional-age students. However, the metropolitan college is not self-contained, even with respect to the locations where classes are offered. It is very common for these campuses to offer courses all over town besides at the campus itself—at such places as high schools, municipal buildings, and even over the city's cable television system. So, the notion of the campus being self-contained has limited applicability to the metropolitan campus.

The high-risk groups described by Gilchrist, thankfully for the metropolitan college official, do not exist in large numbers. There may be no dormitory (residence hall) students at all. It is common for members of sororities and fraternities not to live in their "houses," which, instead, may be lodges without live-in facilities. Presumably, those who choose to be members of Greek letter organizations might be at higher risk than the rest of the population, but they tend to be a distinct minority and have limited influence on campus life.

Gilchrist's point that programs developed in one locale do not necessarily translate well to another is particularly noteworthy. It is very difficult to find identical situations where programs of any kind can be duplicated elsewhere with identical results. Rather, prevention specialists are cautioned to study carefully the dynamics of specific situations, especially the campus culture, before attempting to use specific programs as models.

Moreover, I agree with her observation that the political and philosophical positioning of a prevention program should not be underestimated. In fact, those two factors may well determine the fate of a specific program. I believe this observation is especially true in the metropolitan setting because the citizens frequently feel as though they *own* the institution and have a say in its operation whether or not they

ever attended it. This is a very different political environment than that of independent institutions, which may desire amicable relations with the local community but do not feel an obligation to foster them. The importance of paying careful attention to the local political climate cannot be underestimated.

As was mentioned earlier, Gilchrist's assertion that campuses are self-contained environments does not apply to the metropolitan institution. Perceiving a metropolitan university as an island within an urban sea is simply incorrect. On the contrary, metropolitan institutions often describe their urban area as the campus, and institutional programs and activities frequently are located all over the metropolitan area.

Kuh Section. The caveat Kuh introduces early in his section speaks to the point that I am attempting to make in this paper. Most of the research included in his section does not apply to community college or urban university students, nor does it apply to students over 23 years of age. In the case of many metropolitan universities, the majority of the students *are* over 23 years of age, so the material included in the section may not apply to them for two reasons: their age and the type of institution they attend.

Kuh observes that for commuting students, more of their time is spent off campus than on, and, as a result, issues related to the abuse of alcohol and other drugs become as much a responsibility of the community as of the institution. This observation is exactly right. It is very common that students spend their social and recreational time off campus. In these environments the responsibility becomes that of the local community rather than of the campus. As a result, broad-based community intervention programs, discussed earlier in this compendium, have much more potential for success than narrowly focused, campus-based programs.

Finally, Kuh makes the point that campus-specific strategies need to be employed because institutions of higher education are so different from each other. Again, this philosophical approach is consistent with research that has been conducted in the past few years on colleges (Kuh, Schuh & Whitt 1991). Although there can be a consistency in philosophies across campuses, the specific programs and interventions that are implemented on a specific campus need to be developed for the local situation. Just because an approach works at one campus does not mean that it will work anywhere else.

Berkowitz Section. Berkowitz begins his section by asserting that very little is known about the use or abuse patterns of nontraditional students (taken by this reader to mean those older than 23 years of age) and of members of ethnic minority groups. This is very true and complicates the work of prevention specialists in the metropolitan university setting. Frankly, it is difficult to conduct these kinds of surveys of metropolitan university students because so many attend the university on a part-time basis, live off-campus, and are simply unavailable to participate. Mailings to them are costly, and their participation rate in mail-conducted research is low. A very useful first step in the development of prevention programs at metropolitan campuses would be to develop a reliable, yet inexpensive, way of conducting studies of alcohol and

other drug use. One approach that might be tried with metropolitan students is the use of telephone polls. Most students have telephones, and conducting a structured interview can yield excellent results (Oltmanns & Schuh 1985).

Berkowitz observes that the use of surveys for evaluation purposes has substantial drawbacks. One fundamental shortcoming of forced-choice instruments is that they have a very difficult time uncovering motivation for behavior. An alternative is the use of qualitative methodology since the goal of this type of research is understanding (Crowson 1987; Lincoln & Guba 1985). The use of focus groups and other interview techniques can yield rich data that will be very useful in understanding the behavior of individuals (Whitt 1991).

Qualitative methods can be time consuming and expensive (MacKay & Schuh 1991). The amount of effort required to conduct a good qualitative study can be enormous. As a result, one should not assume that qualitative methods provide an easy alternative to quantitative methods. They are very useful, but should not be used without understanding that a good qualitative study costs a great deal of money and is very time consuming.

A Final Word

The authors of the four major sections have done a good job of outlining some of the problems related to the development of prevention programs on college campuses. Gonzalez' ITMADP model has excellent promise as a comprehensive way of predicting individual and leadership behavior in alcohol and other drug-related situations. Gilchrist's observation that high-level administrative support is essential is astute. Especially in this era of difficult financial times for many colleges and universities, high-level support is necessary to sustain these kinds of programs. Frequently, these programs are financed through "soft" money (i.e., gifts, grants, or other forms outside the traditional revenue stream), and it is not easy to find funding sources when the soft money is gone. Support from senior administrators, faculty, and members of the governing board is essential.

Kuh's observation about *espoused* versus *enacted* philosophy is very important to the campus culture. Descriptions for prospective students of life on campus must be consistent with what students encounter once they enroll. Whether campus life is highly structured or not, inconsistent messages lead to cynicism and poor student morale, as well as a lack of trust and confidence in campus leadership.

Berkowitz' comment about data collection being an integral part of any program is true. Without a good data base from which to work, programming to combat the abuse of alcohol and other drugs is analogous to flying a plane without navigational equipment. A good data base is essential, but multiple methods should be used. Qualitative and quantitative methods are both helpful in this kind of work. Quantitative methods help describe the actions of people, but qualitative methods are the best way, in my view, to find answers related to why people behave the way they do. I would advocate that both methods have a place in the development of a data base.

The Perspective of Historically Black Colleges and Universities[11]

Introduction and Background

Prior to the 1980s, campus-based alcohol and other drug programs were a rarity, and widespread alcohol use was frequently the norm. During the past decade, and following the passage of the Drug-Free Schools and Communities Act of 1986, there has been an unprecedented proliferation of campus-based programs focused on the prevention of alcohol and other drug problems. Concurrently, research on alcohol and drug use for college students has increased. In the midst of expanded research and program activities, there remains a conspicuous paucity of data on alcohol and other drug use among African-American students.

Most African-American students receive their baccalaureate education at one of the nation's 117 historically black colleges and universities (HBCUs). These institutions are symbols of excellence and citadels for the training and modeling of African-American leaders. Any behavior that could jeopardize the mission of HBCUs warrants swift intervention. The abuse of alcohol and other drugs by college-age African-American students represents one such threat.

Historical Background

The purpose of this paper is to explore, in a cursory fashion, the relevance and usefulness of the issues raised in the previous sections to the prevention of alcohol and other drug abuse on HBCU campuses. Although each HBCU has its own distinct characteristics, this paper addresses the commonalities among them as it relates to alcohol and other drug abuse issues. The history of HBCUs is provided as a context for framing the role of these institutions in addressing the theoretical, research, and programmatic issues related to alcohol and other drug use on their campuses.

Historically black colleges and universities have an indisputable responsibility to provide leadership in addressing the drug abuse problem. This responsibility is linked to the founding missions of most of these institutions, which have played a very critical role in the shaping of American society. Patricia Roberts Harris (1971) describes the existence of black colleges as a response to the disconnected relationship of the black person to the total American community. These institutions owe their existence to the condition of African-Americans within this country (Harris 1971; Jones 1971).

The mission of black institutions of higher learning has always been broader than that of traditional academia. In addition to the primary role of education, HBCUs (and particularly private black colleges and universities) have served as a catalyst for social

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[11] Bettye Ward Fletcher, Jackson State University, author.

change. Collectively, these institutions have an established legacy of being responsive to the varied issues facing the African-American community.

According to Mack Jones (1971), the founding charge of these institutions was to train black scholars who could challenge and overcome the immediate threats to the survival of the black community while simultaneously pursuing equality. More than a century later, this charge remains the same. The immediate threats may be different, but they are nevertheless challenges to the survival and prosperity of the African-American community. Alcohol and other drug abuse represents an unprecedented threat to the survival of the African-American community. The role of HBCUs in addressing this issue is contained in the founding charge of many of these institutions.

Because most HBCUs were founded by leaders with a strong religious background, black leaders of higher education have historically opposed the use and abuse of substances. For example, Booker T. Washington felt that character training for black students must be supported by religion and should stress sobriety and sexual restraint. Similarly, during the 19th century, blacks were strong supporters of the American Temperance Movement, partly because of its close association with antislavery reform. Often these same organizations participated in the founding of black institutions. Further, many of the founding groups were established religious organizations which also opposed the use of alcohol. Atlanta University in Atlanta, Georgia; Fisk University in Nashville, Tennessee; Talladega College in Talladega; and Tougaloo College in Tougaloo, Mississippi, are four southern institutions which were established by the American Missionary Association between 1865 and 1869. Although a majority of HBCUs are not controlled by a religious denomination, 56 of the 72 black private institutions report having a religious affiliation (Harper 1971).

As a result of these historical linkages, the opposition to the use of alcohol and other drugs on campus at HBCUs, particularly at the private institutions, has been more evident than on white campuses. For example, the alcohol-related behaviors that have historically characterized fraternities and sororities on predominately white campuses are less evident on black campuses. Generally, on-campus pubs and group drinking competitions are less characteristic of HBCU campuses.

Unfortunately, the historical development of HBCUs has not stopped the emergence of alcohol/drug-related problems on HBCU campuses. People in contemporary society are more tolerant toward substance abuse. However, HBCUs, unlike traditionally white campuses, do not have a past record of accepting heavy alcohol use on their premises.

Drug abuse, whether within the wider African-American community or on the HBCU campus, is rapidly destroying many of the social and cultural traditions, values, and beliefs that have sustained this ethnic group. Historically, the opportunity to obtain a college education has been a highly valued and privileged opportunity—not to be taken lightly or jeopardized in any way, but especially not by the use of mind-altering substances.

The Need for Theory

In section III, Gonzalez raises the critical issue of the role of theory in the design and implementation of campus-based prevention programs. As posited by Gonzalez, campus-based programs have emerged in an atheoretical way. This is partly attributable to the fact that prior to the 1980s, campus alcohol and other drug use was not typically viewed as problematic but as characteristic of the college experience. The passage of the Drug-Free Schools and Communities Act and the Drug-Free Workplace Act mandated action by institutions of higher learning. Regrettably, the field lacked a theoretically grounded body of literature on which to develop an agenda for action. In the absence of empirically validated practices, the theory has evolved from practice, rather than the reverse. It must be recognized that theory formulation and testing is a time-consuming process. The enormity of the drug problem required immediate action, so preventive and interventive efforts did not have a strong theoretical basis. A bridge is needed between the work of researchers and practitioners so that programs will be based on both theory and real-world experience.

The efficacy of the Integrated Theoretical Model for Alcohol and Drug Prevention (ITMADP), which has been proposed by Gonzalez, has not yet been tested on HBCU campuses. The model's focus on individual as well as environmental factors does provide a broader conceptual framework for addressing the variety of influences on alcohol and other drug use. Because of the diversity of institutions in terms of size, gender composition, and ethnicity, the universal applicability of a model cannot be assumed. The usefulness of the ITMADP model for HBCUs must be established through testing within the African-American student population.

The research imperative for HBCUs, as it relates to alcohol and other drugs, is indeed an urgent one. Theoretically based prevention and intervention efforts are unquestionably needed. African-American scholars must also develop theoretical models and approaches for addressing alcohol and other drug abuse specifically within the African-American community. Nathan Harris' challenge to black scholars two decades ago to develop new norms and ideological perspectives is still warranted (Hare 1969).

In addition to developing theoretically grounded approaches for African-American communities, HBCUs are also challenged to cultivate an interest in research among African-American students. This includes imparting the knowledge base and analytical skills that will enable the development of valid measures for the population being studied.

Implementation of Programs

HBCUs face many challenges in the implementation of prevention and intervention programs. Although a commitment from the highest level of administrators is a necessary condition, as suggested by Gilchrist, it is not a sufficient condition. Equally important is the support of a core of individuals who represent

various units within the institutions. The best evidence of high-level administrative commitment is the allocation of money and staff resources.

As noted earlier, many HBCUs were highly influenced by the philosophies of their founding organizations, which were mostly religious groups closely aligned with the temperance movement. Consequently, viewed within a historical context, abstinence was frequently the desired goal. This orientation has not been sustained over time. However, anecdotal information suggests that alcohol is less frequently used on HBCU campuses.

Little definitive data are available on the effectiveness of campus-based programs. A necessary condition for determining the effectiveness of programs is to establish measurable outcome goals. As indicated by Gilchrist in section IV, an array of outcomes exists; however, the implementation of campus-based programs has rarely evolved out of structured planning processes. The proliferation of campus-based programs to counter alcohol and other drug abuse was, to a large extent, a response to federal mandates and to the intense national (albeit short-lived) focus on this issue.

The response for many HBCUs was more reactive than proactive. Although the drug problem was presented as a matter of national urgency, money was not provided to alleviate the problem. Because the federal mandate came at a time when budgets were being cut, colleges and universities were forced to rely on external support. This was particularly true for HBCUs. Programs were thus developed very quickly.

The Role of the Community

As suggested by Kuh, the haste to address the problems of alcohol and other drugs on campus often precluded the larger community from becoming involved in working with the campus to find solutions. When one considers its historical role, one sees that the HBCU is an integral part of the larger African-American community and serves as a valuable community resource. Consequently, links between the institution and the community are essential.

Strategies for improving campus-community relationships can be viewed within the framework of a community prevention system. The process of developing such a system is one of building relationships among individuals, families, agencies, organizations, and institutions. The first phase of developing a prevention system is initiating a communitywide effort that includes all segments of the community. It is at this level that the problem can be described and the response can be made. (Fletcher 1989). Therein lies the necessity of an inclusive process that recognizes alcohol and other drug abuse as the result of environmental, as well as individual, influences.

Outcome Assessment

Another critical aspect of campus programming, assessment, is raised by Berkowitz in section VI. Assessment of campus alcohol and other drug use can be most valuable when it is used as an integral part of the planning and implementation process. The motivation for conducting an assessment will determine its usefulness. Surveys which are done because of an external edict and are not viewed as a useful tool will be of minimal value. On the other hand, when viewed as a means of monitoring change and documenting strengths and weaknesses, the assessment process can serve as the guiding force in program development. Until the assessment is viewed as a meaningful tool for effecting program goals, it will continue to be of little use.

Summary

In summary, although alcohol and other drug abuse is antithetical to the founding premises of many HBCUs, these institutions have not been insulated from such behavior. The enormity of the alcohol and drug problem and the recent national focus in this area have resulted in the emergence of approaches devoid of a strong theoretical foundation. HBCUs have a critical role in addressing alcohol and other drug abuse. The need for research requires that African-American scholars develop prevention and intervention models that are both theoretically grounded and practitioner-oriented for solving alcohol and drug-related problems within the African-American community.

Response from a Public University[12]

Introduction

I was eager to review the articles in this compendium because I am a student affairs administrator in a large, public, research university with a reputation for being a "party school." I have also been involved for the last 20 years in efforts to reduce or eliminate drug and alcohol abuse. I have heard a great deal of talk and, lately, have witnessed a great deal of action. Two efforts by the U.S. Department of Education have led to this action. First, the voluntary national standards established by the Network of Colleges and Universities Committed to the Elimination of Drug and Alcohol Abuse have provided a blueprint for action by institutions of higher education. Second, federal funds to support drug and alcohol prevention efforts have been made available through grants administered by the Fund for the Improvement of Postsecondary Education. In spite of these efforts, as Gonzalez correctly points out

[12] M. Lee Upcraft, Pennsylvania State University, author.

in his article, we still have very few theoretical models to guide our efforts and even less evidence to show whether or not our efforts have worked.

As a student affairs administrator, I see the results of alcohol and drug abuse daily. I do not need any more theory or research to know that the use of alcohol and drugs by college students leads to a plethora of problems: ineffectual interpersonal relationships, sexual assaults, campus violence, suicide attempts, arrests by campus law enforcement officers, and property damage, as well as poor grades, failure to graduate, and ultimately, for some students, chemical addiction.

I *do* need more theory and research, however, to know what to do about this plague. This compendium has helped me (1) understand the context within which college student alcohol and drug abuse occurs; (2) think about an integrated way of looking at the problem; (3) know what works and what does not work, and why; and (4) understand why I must do a better job of assessment, and how I might do that.

Comments on the Gonzalez Article

Gonzalez does an excellent job of reviewing the history of our piecemeal efforts to reduce or eliminate drug and alcohol abuse on college campuses and showing why most of them have limitations. We have tried, for example, to "educate" students with information about alcohol and other drugs, in the hope that information would somehow translate into more responsible behavior. It has not. In addition, we have tried to reduce availability through many means—including raising the drinking age to 21—again without apparent reductions in use or abuse. We have also tried to "scare the hell out of them," confident that when students knew the potentially dangerous effects of alcohol and other drugs, they would stop self-destructive behavior. They have not. Alternatively, we have tried to teach them the skills to "say no" to alcohol and other drugs, but "saying no" to drugs also means "saying no" to the peer group, which in many ways is more difficult for students than "saying no" to drugs and alcohol. And, finally, we have tried to build collegiate communities that reinforce healthy behaviors. Unfortunately, we do not really have the knowledge or the tools to plan and implement effective community-based interventions. And even if we did, it takes a long time to achieve results using community-based models, and, on most campuses, there is no consensus among faculty, administrators, and students about the proposed solutions.

I like Gonzalez' Integrated Theoretical Model for Alcohol and Drug Prevention (ITMADP) because it incorporates the best from the above approaches and discards the ineffective. It is also consistent with student development theory in that it focuses upon (1) the person, and who he/she was before coming to college; (2) the environment, and how it influences the person; and (3) the person-environment interaction. It forces me as an administrator to think, plan, and implement new strategies in a comprehensive, rather than a piecemeal, way. More specifically, I must focus on individually oriented skills-building activities (assertiveness, stress management, and interpersonal communication) and on community-oriented interventions (media campaigns) that discourage health-compromising behaviors.

I also like ITMADP because it is based on reality. We know that a student's peer group often reinforces unhealthy behaviors and that most students are drinking before they come to college. These are realities. We also know that awareness does not necessarily translate into behavior, and we know that college youth believe they are immortal. In addition, we know that "forbidden fruit" is attractive, especially when it is readily available and the potential risks are remote.

The ITMADP model takes into account these realities, and strikes to the heart of the problem: If you want to change behavior, you must change both the individual and the environment. But perhaps even more importantly, this model provides a framework within which interventions cannot only be planned and implemented, but evaluated as well. Gonzalez' model must now be tried and tested to determine its efficacy. My own guess is that it will withstand serious research scrutiny and become a useful model, both for practitioners and researchers.

Comments on the Gilchrist Article

Gilchrist reinforces many of Gonzalez' ideas about the failure of prevention programs, but unfortunately many of the studies she quotes were done on adolescents, not college students. Also, most studies of college students were done on traditional-age college students, not the adult students who now constitute nearly a majority of college students in America. Although many of the same principles apply, many more do not. For example, efforts to "inoculate" students from peer pressure are virtually useless for adult students. My guess is that inoculation strategies have worked for marijuana and cigarettes because there is a societal consensus against the use of these substances. There is no such societal consensus against alcohol use. In fact, American society condones alcohol use as long as it does not become abuse.

Gilchrist argues very strongly that we must focus on environments as well as on students. Gonzalez would agree, and so do I. I could not agree more that college campuses ". . . may be uniquely suited to the person-in-environment approach in that they are relatively self-contained environments." Unfortunately, most college students today (about five in six) live and work off campus and study part time. Although those who are in the self-contained environment are especially susceptible to our influence, most students are not easily influenced because they are not a part of campus life.

In summarizing the research on the effectiveness of ecological approaches, Gilchrist correctly concludes that "only those intensive educational approaches where students received direct training in multiple sessions over time result in actual changes in drinking behaviors." For me as a student affairs administrator, this is a very important finding. It means that one-shot approaches, such as informational programs—no matter how well done or how well attended—are not effective substitutes for intensive and sustained interventions.

Gilchrist's article provides me with a blueprint for implementing a comprehensive approach by referencing the work of Parcel, Simons-Morton, and Kolbe (1988). The

authors of this work state that one must start with an institutional commitment, alterations in policies and practices, and alterations in roles and actions of staff—which lead to new student learning activities. All are key elements. I disagree that "sustained administrative support is so critical that proceeding with planning without administrative support is likely to be fatal." It has been my experience that successful administrative support follows from a documented presentation of the problem and from the presentation of a comprehensive plan. I would argue that the attempted implementation of a plan without administrative support will be fatal.

One of Gilchrist's most powerful arguments is the need to define precise goals for alcohol and other drug prevention programs. This has not always been done. We need to ask ourselves what our primary goal is. Is it prevention of initial use? Is it abstinence? Is it reduction of abuse? Gilchrist does not advocate any particular goal, but she does argue for clarity and consistency. Regarding the latter, I know of many institutions that fail to practice what they preach, which is confusing at best and hypocritical at worst. This is especially true of institutions whose policies reflect abstinence or lawful use, but whose practices may best be characterized as "look the other way."

Comments on the Kuh Article

Kuh's article is especially instructive because it provides well-documented evidence of the influence of collegiate environments on student development, in general, and on alcohol and other drug behavior, in particular. His ecological model stresses the influence of various campus environments, including the physical, the organizational, the social-psychological, and the cultural. As an administrator in a large, public, research university, I am somewhat saddened by what he says about physical environments: that they are more positive when they are less crowded, more structured, and smaller. Perhaps the lesson here for those of us in large universities is that we must work harder to create small microenvironments within our larger environments. This could be done through residential and campus programs that provide opportunities for students to interact in smaller, more intimate environments.

Kuh stresses the importance of the organizational environment, both in terms of policies and activities. He argues, and I agree, that many drug and alcohol abuse prevention programs have helped, but the increase in the drinking age to 21 has not necessarily reduced use and abuse, especially off campus. We must target certain of our campus environments, such as single-sex halls and fraternities and sororities, where alcohol and drug abuse appear to be greatest.

Kuh describes the typical peer environment of institutions with traditional-age students: There is a great deal of peer pressure to drink, easy availability of alcohol, social norms that reinforce alcohol use and abuse, and existence of the concept of drinking as a rite of passage—all of which, from my experience, are accurate. He also correctly identifies the cultural attitudes that influence alcohol use and abuse, including the external environment (which is pro-use, if not pro-abuse), the institution (where attitudes range from abstinence to implicitly encouraging abuse), various subcultures

(whose attitudes range from promoting abstinence to promoting abuse), and individuals (whose attitudes range from fostering abstinence to accepting addiction). These notions once again reinforce the idea that the campus environment, as well as individuals, must be the intervention target.

Kuh's most important conclusions, I believe, relate to the susceptibility of individuals to peer and environmental influence. Why do some students seem to be immune to environmental influences, yet others seem to be particularly susceptible? Kuh's review indicates that students who are most susceptible to environmental influence, whether good or bad, are those most open to change, most concerned about social acceptance, and most responsive to peer pressure. Women, less-confident students, and first-year students are especially vulnerable to environmental influences. For me as a practicing student affairs administrator, this means my alcohol and drug interventions must be both targeted and timely.

Kuh concludes by making recommendations that make a great deal of sense to me as a student affairs administrator: Know the drinking behaviors of students on your campus; make programs campus specific; target at-risk groups; develop policies that are well articulated, well known, and consistently enforced; and reinforce health-enhancing behaviors. But perhaps most important of all, work at developing "human-scale" environments that will model healthy behaviors and will discourage alcohol and other drug abuse. In short, develop caring environments where students, faculty, and staff get involved with one another.

Comments on the Berkowitz Article

Berkowitz, in his article on assessing collegiate substance use, identifies precisely what is wrong with most studies on student alcohol and other drug use and abuse: poor sampling, unreliable and invalidated instrumentation, poor problem identification, poor methodology (most often failure to take into account all variables contributing to use and abuse), and incomplete data analysis (such as generalizing from single-institution studies). To this list I would add the bias of the researcher. Some studies are conducted by researchers or organizations who intend to "prove" certain preconceived notions. When I review a study, I first look at the prior record of the researcher. I ask myself if this study has been done by the "responsible drinking" crowd, the "neoprohibitionist" crowd, the "academic" crowd, or the "government" crowd. All may have a platform that biases their results, and the reader must be diligent in assessing any possible bias.

Berkowitz sees gaps in the research, most of which result from the assumptions that all students are alike and that substances affect all persons in the same way. We seldom find studies of student subpopulations such as nonusers, multiple-drug users, or high-risk users. We seldom see studies of possible differences among women, men, racial/ethnic minorities, poorer students, and older students. We also have problems with our definitions of use and abuse, particularly with a drug like alcohol, which is illicit for some (those under 21 years of age) and legal for all others.

Perhaps most importantly, Berkowitz sees many uses for assessment besides merely describing the present condition of alcohol and other drug use and abuse on college campuses. Assessment studies can support initiation and alteration of campus policies and can provide support for counseling and educational programs. Such studies can also demonstrate the effectiveness of various intervention methods. Especially helpful in this regard is the movement toward standardization of survey instruments. Unfortunately, Berkowitz focuses exclusively on quantitative research methodology, while ignoring the growing field of qualitative research methodology. Focus groups and individual interviews, for example, can provide the depth of understanding about drug and alcohol problems that surveys typically do not provide.

Conclusion

The bottom line is that well-designed and well-controlled studies have exceptionally high credibility in collegiate environments, where research is highly valued, especially among faculty. Research is also a very effective way of validating campus alcohol and other drug problems to those who are skeptical about the existence of such problems. In addition, research can provide guidance for planning and intervention and for demonstrating program effectiveness. In short, assessment is a powerful way of gaining, maintaining, and expanding the resources needed to address campus alcohol and other drug problems.

I believe these authors have done an excellent job of describing accurately and realistically the problems of alcohol and other drug abuse that I face as a practicing student affairs administrator. I would add one overall suggestion. If we want intervention methods that are intensive, long term, applicable to all students (regardless of their gender, age, enrollment status, or racial/ethnic background), and if we want to promote health-enhancing campus communities, why not revise our curricula to do so? Courses for credit that focus on campus alcohol and other drug issues and that encourage peer interaction may be the most effective way of influencing both individuals and environments.

This approach has many advantages. First, the intervention is sustained over a period of time (a semester) and is therefore intensive. Second, graded assignments and examinations provide the rewards and reinforcement that today's students value. Third, the content can be specific to the campus, and out-of-class assignments can combine the experiential with the didactic approach. Fourth, part-time, older, and off-campus students—whose participation rate in on-campus, voluntary programs is notoriously low—will, in fact, enroll for credit courses. Fifth, credit courses offer an opportunity for intellectual depth that other intervention methods cannot provide. And finally, credit courses offer opportunities to influence students' attitudes and behaviors.

It is clear that what we have learned from the research and literature is helpful not only in developing comprehensive models of prevention, such as the one suggested by Gonzalez, but also in developing and evaluating programs, as suggested by Gilchrist and Berkowitz. But the themes of environmental influence, developed by Kuh and reinforced by the other authors, are clearly the trend for the

future. We need to know more about how environments can be influenced so that they can positively affect students.

Alcohol and other drugs are such a pervasive, negative influence on today's campuses that we cannot afford to diminish our efforts to know more. To do anything less is a failure to live up to our educational and moral obligations to students.

A Private University Perspective[13]

Introduction

In 1960, W. H. Cowley spoke on general education to university presidents at a conference held at Harvard University. At that time, Cowley was a professor of higher education at Stanford University. Cowley described three types of college teaching:

1. Teaching which trains people to extend the frontiers of a subject (*logocentric* teaching).

2. Teaching which trains practitioners of any vocation (*practicentric* teaching).

3. Teaching which interprets the findings of the first two styles for the informed layman (*democentric* teaching).

Cowley stressed that all of these types of teaching correlate with each other. Logocentric teaching advances knowledge; practicentric teaching advances the application of that knowledge; and democentric teaching enhances the understanding of the general public.

Practicentric teaching, which could be viewed as a bridge between the specialist and the layman, is the focus of higher education administrators. The goal of such administrators is to provide both students and informed laymen with practical, usable knowledge.

Pragmatic Practice

The articles in this compendium summarize the current state of research on the prevention of alcohol and drug abuse on college campuses. The articles, which have a practicentric focus, contain specific suggestions for today's higher education

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[13] William H. Barr and Judith M. Chambers, University of the Pacific, authors.

administrators. The writers have drawn skillfully upon the work of logocentric teachings to develop these suggestions and have, consequently, extended the frontiers of practice. The field of alcohol and drug abuse prevention has traditionally had a pragmatic, service-oriented focus rather than a theory-oriented focus.

Administrators have sometimes been criticized for this lack of emphasis on theory. However, much of the research being performed in this field has addressed the general public, not the college or university student. Those responsible for designing and implementing programs to prevent drug and alcohol abuse were unable to apply the results of such research to their programs. Therefore, administrators used a commonsense basis for their programs: They inferred that increasing a student's knowledge about substance abuse would change his or her attitudes, which would lead to a change in behavior. This model, although it seemed intuitively sound, turned out to be flawed. Over the years, administrators have realized that substance abuse problems are more deeply rooted and that abusers are not very responsive to theories about the consequences of abuse.

Recently, greater pressures have been applied on administrators to improve the effectiveness of their programs. These pressures have come both from the general public and from the federal government. Because of this renewed democentric interest in the field, the articles in this compendium should be very useful.

The Need for Commitment

The article by Gerardo Gonzalez, "Theories, Dominant Models, and the Need for Applied Research," describes several research-based models for ways to effect change in this field. He introduces new terms for concepts that merit wider exposure—such as "perceived susceptibility," "peer refusal skills," and "multiple causes." Gonzalez' work demonstrates that the wider society contains multiple forces that impel a student to abuse alcohol or drugs and that these forces must be addressed directly and changed. The influence of advertisements for alcohol, for example, should not be underestimated. One way to reduce alcohol abuse on college campuses would be to develop anti-abuse advertising campaigns that are at least as powerful as the campaigns of alcohol marketers.

In addition to confronting the problem of alcohol advertising on campuses, administrators of substance abuse prevention programs need clear statements of commitment from college and university presidents. The article by Lewayne Gilchrist mentions this need for "commitment from the highest level of an organization." The president must clarify his or her stance on all aspects of alcohol use or advertising. For example, he or she must clarify the following: whether programs apply to alumni returning to campus; whether alcohol marketers are allowed to define the atmosphere in or around collegiate events at a stadium; and whether intramural programs and fraternity parties are sponsored by campus representatives of the alcohol beverages industry.

Influences for Change

The determination of policies on university campuses is often a collaborative effort. Policies are often designed by "planning groups" or "practice planning groups" (from the Gilchrist article). On the campuses of private schools, such planning groups face an unusual problem: Because students pay high tuitions, they sometimes assume they are entitled to determine policies. In private schools, administrators of substance abuse prevention programs must negotiate with students regarding potential policies rather than imposing policies on them without their prior knowledge.

The Gilchrist article notes that students do not typically reduce their alcohol intake as a result of believing their health, in general, is threatened. Students respond more favorably to specific deterrents such as being arrested for drunk driving, fear of date rape, or fear of being sent to a detoxification center.

George Kuh's article, "The Influence of College Environments on Student Drinking," offers the conclusion that policies and programs designed to reduce college students' alcohol use have been generally ineffective. Policy changes seem to have had more effect than programs on "responsible drinking." We agree with this conclusion. However, changes in policy sometimes lead to changes in students' behavior. For example, when on-campus fraternity parties at the University of the Pacific were reduced and better controlled, the number of fights outside of fraternity houses decreased rapidly.

In addition to reducing chronic substance abuse, administrators must focus on helping moderate drinkers or nondrinkers to avoid becoming addicted. Kuh makes an important point that developing small, human-scale environments on campus helps engender a sense of belonging and support in students that empowers them to choose healthy outlets rather than alcohol or drug use.

The Role of Data

Administrators of alcohol and drug abuse prevention programs have not gathered or analyzed much data on their students or on program effectiveness. One reason for not gathering data is that governing boards have not usually required it. Another reason is that the presentation of data does not usually lead to results on a campus. Embarrassing publicity, such as a death from cocaine abuse, is more likely to effect change. Although data are important for managing budgets and planning for the future, people are usually more motivated by hearing real stories about other human beings.

The Need for an Integrated Approach

To help students recover from substance abuse problems and to improve the choices they have for more healthful behaviors, college presidents and administrators must integrate the three approaches mentioned earlier—the logocentric, the practicentric, and the democentric. Only an integrated approach can bring about effective and enduring change.

Schuh References

Crowson, R.L. (1987). Qualitative research methods in higher education. In J.C. Smart (Ed.), Higher education: Handbook of theory and research (Vol. III, pp. 1-55). New York: Agathon.

Gerald, D.E., Horn, P.J., & Husser, W.J. (1989). Projections of education statistics to 2000. Washington, DC: U.S. Department of Education.

Grobman, A.B. (1988). Urban state universities: An unfinished national agenda. New York: Praeger.

Jacoby, B. (1990). Making up deficiencies: Is there a choice? Metropolitan Universities, 1(2), 19-29.

Jones, J.D., & Damron, J. (no date). Student affairs programs at universities in urban settings. Washington, DC: NASULGC.

Kuh, G.D., Schuh, J.H., & Whitt, E.J. (1991). Involving colleges: Successful approaches to fostering student learning and development outside the classroom. San Francisco: Jossey-Bass.

Lincoln, Y.S., & Guba, E.G. (1985). Naturalistic inquiry. San Francisco: Jossey-Bass.

MacKay, K., & Schuh, J.H. (1991). Practical issues associated with qualitative research methods. Journal of College Student Development, 32, 424-432.

Oltmanns, G.V., & Schuh, J.H. (1985). Purposes and uses of residence hall libraries. College and Research Libraries, 46, 172-177.

Pascarella, E.T., & Terenzini, P.T. (1991). How college affects students. San Francisco: Jossey-Bass.

Rhatigan, J.J. (1986). Developing a campus profile of commuting students. NASPA Journal, 24, 4-10.

Schuh, J.H., Andreas, R.E., & Strange, C.C. (1991). Students as metropolitan universities. Metropolitan Universities, 2(3), 64-74.

Wagner, T.E. (1990). Adapting your institution to meet the needs of commuter students. Metropolitan Universities, 1(2), 61-71.

Whitt, E.J. (1991). Artful science: A primer on qualitative research methods. Journal of College Student Development, 32, 406-415.

Fletcher References

Fletcher, B. (1989, November). The role of HBCUs in facilitating substance abuse education, prevention and intervention efforts: Research and networks. Commissioned paper presented at One-Third of A Nation Conference, Howard University, Washington, DC.

Hare, N. (1969, December). The challenges of black scholars. The Black Scholar.

Harper, C. (1971). The legal status of the black college. Daedalus: Journal of the American Academy of Arts and Sciences, 100(3), 772-782.

Harris, P.R. (1971). The Negro college and its community. Daedalus: Journal of the American Academy of Arts and Sciences, 100(3), 720-731.

Jones, M. (1971). The responsibility of the black college to the black community: Then and now. Daedalus: Journal of the American Academy of Arts and Sciences. 100(3), 732-744.

Upcraft References

Parcel, G.S., Simons-Morton, B.G., & Kolbe, L.J. (1988, Winter). Health promotion: Integrating organizational change and student learning strategies. Health Education Quarterly, 15(4), 435-450.

VIII

A Final Word

A careful review of the four major papers presented here reveals several themes that are relevant to campus alcohol abuse and other drug use. The first theme addresses the interaction of individual and organizational change strategies upon alcohol and other drug use. The second examines the importance of restructuring the campus environment and culture including policies, practices, and social norms of sub-environments in order to affect alcohol and other drug use. The third theme focuses on the evaluation of programs and, in particular, the need for a theoretical framework for conducting program evaluation as well as more sophistication in technique and data sampling.

Theme 1: Individual and Organizational Change

In addressing the first theme of individual and organizational change strategies, Gonzalez states it well when he says that a comprehensive effort must be more than a conglomeration of different activities. It should have an empirically tested framework and have activities that are carefully planned to complement each other. On too many campuses, there is a fragmentation of efforts with no unifying theme to draw together all of the various programs.

Additional support for this point of view is provided by Gilchrist's research, which suggests that a comprehensive approach is an integration of organizational change strategies in conjunction with individual change strategies. In her paper, Gilchrist comments on a person-in-environment model that blends theories of individual behavioral change with organizational change to achieve a more enduring effect. As in Gonzalez' ITMADP model, Gilchrist suggests a focus on the dynamic interaction between the person and the environment. Such an interaction is seen as crucial to developing and maintaining the behaviors that enhance health and reduce drug use. The goal is to have a social environment that supports and sustains individual behavioral change.

Gonzalez proposes that before individuals can engage in health-enhancing behaviors they need appropriate skills (e.g., assertiveness, stress management, interpersonal communication) to resist negative pressures from the environment as well as to engage in positive interactions with that environment. However, strategies such as affective education, values clarification and knowledge-attitude-behavior models that focus exclusively on the individual person are not seen as effective.

Intervention strategies that include multiple component systems (peer group, family, schools, media, and community organizations) and aspects of a wide variety of approaches (e.g., providing accurate information on drug use in combination with teaching social resistance skills, utilizing peer facilitators, and changing community policies and norms) are the most promising type of prevention strategies (OERI 1993).

Kuh likewise recognizes the importance of a long-term, comprehensive strategy that takes into consideration the host (student), agent (alcohol), and environment (setting and mores that shape the campus culture). An example of such a comprehensive intervention is provided by Gilchrist when she describes a program at the University of Massachusetts that was designed to address multiple factors (predisposing, enabling, and reinforcing) that affect drinking behavior. Results from this study support other findings which show that changes in drinking behavior can be achieved through intensive educational approaches presented in multiple sessions over a period of time.

Theme 2: Environment and Culture

In addressing the second theme regarding the need to restructure the campus environment, Kuh describes the behavior of some colleges and universities in the language of addictive systems: resistant to admit that alcohol is a problem (denial), resistant to develop new policies or relying on state laws for regulation (control), defensive about criticism (self-centered), and highly resistant to institutional change efforts (rigidity). However, in order to overcome this resistance, Gilchrist suggests that support must come from all levels of campus life. Sustained administrative support is of particular importance, and efforts are bound to fail without top-level endorsement. Once policy is set, it needs to be translated into action for individuals directly responsible for implementing the program. Kuh shares this perspective and adds that any efforts made on campus to develop policies to reduce the availability of alcohol should be designed to fit the campus culture. He goes on to say that the most promising way to influence college student drinking is cultural change, and that students will adopt alternative behaviors for themselves in environments where this is valued.

Both Gilchrist and Kuh discuss the importance of examining the policies, practices, and social norms of self-contained or subenvironments on campus such as housing units, athletic teams, and fraternities to ensure that they will reflect the philosophy of the institution and are organized around the principles of sobriety, care, and concern. Other important subpopulations are ethnic minorities, nontraditional students, abstainers, and those in high-risk categories. Kuh believes collegiate environments that have a health-enhancing philosophy, whether they affect the entire campus or certain subpopulation groups, should be studied for adoption on other campuses.

Theme 3: Theory and Evaluation of Programs

The third and final theme regarding the need for theory-driven models and program evaluation is addressed by Gonzalez and Berkowitz. They point out that the lack of a theoretical framework for college programs has made it difficult to conduct evaluations and answer the question "what works." Berkowitz emphasizes that attention needs to be given to examining the relationship of theory to assessment and programming. He argues that questionnaires which incorporate theory-based items are needed. Berkowitz goes on to say that what is learned from surveys and effective prevention programs should be used to adapt and modify the theories upon which they are based. Moreover, he claims that surveys need to incorporate questions assessing use pattern, pre-disposing motivations and negative consequences of alcohol and other drug use in order to correct misperceptions about campus use and abuse patterns. Misperceptions have been shown to impact students. Finally, as it relates to sophistication, both Gonzalez and Berkowitz agree that a lack of standardization among survey instruments has created numerous problems for practitioners and researchers trying to compare data across institutions in order to assess the severity of the problem and find adequate solutions.

In summary, there are three themes that run through this document worth further consideration and deliberation for program development on campus. Taking into consideration both individual and environmental factors, restructuring units or subunits of the campus to encourage and enable more health-enhancing behaviors, and developing a theoretical framework for program development as well as evaluation are all essential elements in a comprehensive campus-based prevention effort.

References

U.S. Department of Education, Office of Educational Research and Improvement (1993). Reaching the goals: Goal 6: Safe, disciplined and drug-free schools. Washington, DC.

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